

OVERSIGHT OF NRC MANAGEMENT AND THE NEED FOR LEGISLATIVE REFORM

HEARING
BEFORE THE
SUBCOMMITTEE ON ENVIRONMENT AND THE
ECONOMY
AND THE
SUBCOMMITTEE ON ENERGY AND POWER
OF THE
COMMITTEE ON ENERGY AND
COMMERCE
HOUSE OF REPRESENTATIVES
ONE HUNDRED THIRTEENTH CONGRESS

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²Internet link to the report is available at <http://docs.house.gov/meetings/IF/IF03/20131212/101584/HHRG-113-IF03-20131212-SD002.pdf>.

OVERSIGHT OF NRC MANAGEMENT AND THE NEED FOR LEGISLATIVE REFORM

THURSDAY, DECEMBER 12, 2013

**HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY,
JOINT WITH THE
SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON ENERGY AND COMMERCE,
*Washington, DC.***

The subcommittees met, pursuant to call, at 10:14 a.m., in room 2322 of the Rayburn House Office Building, Hon. John Shimkus (chairman of the Subcommittee on Environment and the Economy) presiding.

Members present from the Subcommittee on Environment and the Economy: Representatives Shimkus, Gingrey, Murphy, Harper, Bilirakis, Johnson, and DeGette.

Members present from the Subcommittee on Energy and Power: Representatives Whittfield, Scalise, Hall, Pitts, Terry, Burgess, Olson, McKinley, Gardner, Kinzinger, Griffith, Barton, McNerney, Tonko, Engel, Green, Capps, Barrow, Christensen, Castor, Dingell, and Waxman (ex officio).

Staff present: Nick Abraham, Legislative Clerk; Charlotte Baker, Press Secretary; Matt Bravo, Professional Staff Member; Allison Busbee, Policy Coordinator, Energy and Power; Annie Caputo, Professional Staff Member; Vincent Esposito, Fellow, Nuclear Programs; Tom Hassenboehler, Chief Counsel, Energy and Power; David McCarthy, Chief Counsel, Environment and the Economy; Brandon Mooney, Professional Staff Member; Chris Sarley, Policy Coordinator, Environment and the Economy; Peter Spencer, Professional Staff Member, Oversight; Tom Wilbur, Digital Media Advisor; Jeff Baran, Democratic Senior Counsel; Alison Cassady; Democratic Senior Professional Staff Member; Greg Dotson, Democratic Staff Director, Energy and Environment; and Ryan Skukowski, Democratic Staff Assistant.

Mr. SHIMKUS. Welcome everyone. I would like to call the hearing to order, and I would like to welcome the Commission here again. And I would like to recognize myself for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

We are holding this hearing today to conduct oversight of the Nuclear Regulatory Commission to consider H.R. 3132, Chairman

Terry's bill, the Nuclear Regulatory Commission Reorganization Plan Codification and Complements Act.

[H.R. 3132 appears at the conclusion of the hearing.]

The NRC's role in protecting public health and safety, and the environment, is a vital one, and we take our oversight responsibility very seriously.

Thank you, Commissioners, for making yourselves available today.

Earlier this year, August 13, the U.S. Court of Appeals for the District of Columbia Circuit granted a Writ of Mandamus stating that, and I quote, "the Nuclear Regulatory Commission must promptly continue with the legally mandated licensing process" for Yucca Mountain. Yet, it wasn't until November 18, 3 months later, that the Commission finally issued an order directing the staff to proceed and resume the license review. While I largely agree with the Commission's Order, I question why it took so long, and why some key budget and schedule information is still missing. Given the Commission's history on this topic, I wondered if the NRC was dragging its feet on the issue, or if this is just the NRC's normal pace of operation. As it turns out, the NRC seems to be losing its schedule discipline in a number of areas like new plant licensing, license extensions and power uprate reviews, just to name a few. And that seems odd given the growth of the NRC's budget and personnel over the past 10 years, the reduced number of operating reactors and the decrease in material licensees, and with the withdrawal of many new plant licenses. So on November 21, Mr. Whitfield and I sent you a letter asking for information—for more information to help the committee understand how the growth in your budget and decreased workload has not fostered timelier decisionmaking. At this time, I would like to ask that it be included in the hearing record together with the NRC's response. Without objections, so ordered.

[The information follows:]

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS
Congress of the United States
House of Representatives

COMMITTEE ON ENERGY AND COMMERCE

2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115

Majority (202) 225-2327
Minority (202) 225-3641

November 21, 2013

The Honorable Allison Macfarlane
Chairman
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Macfarlane,

We commend the Commission for directing the staff to proceed with completion of the Yucca Mountain Safety Evaluation Report, a long-overdue action for which the Commission has stated it has adequate resources. However, the Commission's vote took place 97 days after the District of Columbia Circuit Court issued its Writ of Mandamus compelling the Nuclear Regulatory Commission to resume its consideration of the Yucca Mountain repository license application. The pace of the agency's decision-making has prompted questions concerning the agency's use of its staffing and resource, something we would like to understand more fully as we prepare for a hearing examining this and other issues on December 12, 2013.

The NRC's role in protecting public health and safety and the environment is a vital one: one that we strongly support and one that should be adequately funded. In 10 years, the NRC's annual budget has grown from \$626 million to \$985 million and its staff from 3,040 Full Time Equivalents (FTE) in fiscal year 2004¹ to 3,931 FTE² for fiscal year 2014. The staffing increase is at 29 percent and the appropriated funds, 90 percent of which are recovered by fees on licensees (and their customers), have increased by 58%.

We are aware that a portion of the NRC's budget increase was justified by the need to review the Yucca Mountain license application. Growth in the NRC's budget was also justified by the need to review new reactor applications at a time when licensees anticipated more than 20 new reactor licenses would be submitted. The NRC articulated

¹ <http://phadupws.nrc.gov/docs/ML0423/ML042360006.pdf>

² <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/>

these factors in the agency's Congressional Budget Justification for Fiscal Year 2009³, the first year the agency's request exceeded one billion dollars:

"This fiscal year (FY) 2009 budget request reflects an increase in the agency's regulatory activities, driven primarily by an anticipated interest in constructing new nuclear power facilities, oversight of existing reactors, and materials and waste licensing. The agency expects to review 21 uranium recovery applications, which produce the raw materials for nuclear fuel, to receive two applications for new facilities that will enrich uranium to produce the nuclear fuel used in reactors, and to receive an application from the Department of Energy (DOE) to construct and operate a geologic repository at Yucca Mountain in Nevada. During FY 2008, the agency expects to initiate the review of 14 Combined Operating Licenses (COL) applications. During FY 2009, acceptance reviews are anticipated to be performed on seven additional COLs. Commencement of the reviews of these seven COL applications will occur within an 8-month timeframe following the acceptance of the applications. It is the agency's responsibility to review the applications in a timely manner so that our licensees will be able to build and operate facilities that produce electricity needed for our Nation's economic growth. To fund these license application reviews, as well as the many other activities necessary to meet the agency's mission, the agency requests \$1.02 billion for FY 2009." (Emphasis added.)

As you know, the NRC ceased the review of the Yucca Mountain license and has only recently voted to resume its work in keeping with the DC Circuit's mandamus decision.

NRC has accepted applications to build 28 new reactors. At this time, licenses have been issued for only four of those 28 new reactors. Applications for another 15 reactors have been suspended. That leaves applications for only nine reactors still undergoing review, one-third of the previous workload.

In 2004, the NRC oversaw 104 reactors. In the past year, licensees have announced decisions to prematurely close five reactors. By the end of 2014, only 99 reactors will be operating and additional reactors may close prematurely which would further decrease the agency's oversight workload.

In 2004, the NRC oversaw nearly 5,000⁴ materials licensees. Today, that number is down to less than 3,000⁵.

Despite this declining workload, the NRC's schedule discipline appears to be eroded. The NRC has delayed the schedules for all but one license review indicating:

³ NUREG -1100, Volume -24, February 2008

⁴ <http://pbadupws.nrc.gov/docs/ML0303/ML030380431.pdf>

⁵ <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/v25/facts-at-a-glance.pdf>

"Recently imposed budget constraints have resulted in substantial impacts on licensing activities associated with combined license and early site permit applications."

Of the new plant license applications currently under review, six will have been pending for seven years or longer before being issued.

Since the Office of New Reactors was established in 2006, the NRC has failed to issue any new design certifications and has only issued one design amendment. Prior to establishing the Office of New Reactors, the NRC approved design certifications for four new, advanced reactors; the ABWR, the System 80+, the AP600, and the AP1000. The office is currently reviewing three new designs, two renewals, and one amendment. According to the NRC's current schedule, two of them will have been pending for over eight years and one for more than seven years before receiving certification.

We would expect to see any decrease in workload lead to more timely reviews but that does not appear to be the case here. While we heartily support the NRC's mission to protect public health and safety and the environment we feel compelled to ask: Is the NRC functioning as efficiently as it should and are its actions focused on matters that are safety significant?

We realize that part of the workload is the 56 ongoing rulemakings listed on Regulations.gov. This is in spite of the fact that the NRC's own assessment of long term trends in the safety of U.S. reactors⁶ indicated "*the staff did not identify any statistically significant adverse trends in industry safety performance*", showing that safety is *improving* in ten out of fourteen categories with no discernable trend in the remaining four categories. Furthermore, their assessment of short term trends "*...did not reveal any emerging trends that warranted additional analysis or significant adjustments to the nuclear reactor safety inspection or licensing programs.*"

The agency continues to spend heavily on further safety enhancements based on lessons from the Fukushima accident, many of which we support. We are glad the NRC has repeatedly testified that U.S. reactors are safe and that work is well underway to make the safety enhancements that were prioritized as Tier One, the items considered most safety significant. However, as stated in the NRC's *Principles of Good Regulation*: "*Regulatory activities should be consistent with the degree of risk reduction they achieve.*" As the NRC analyzes lower priority issues, the agency is struggling to justify further requirements as cost-beneficial, as we learned through our correspondence on the issue of filtered vents.

We hope to see nuclear energy continue to make a vital contribution to powering our nation's economy; contributing to energy security and providing thousands of jobs supporting families across the country. However, we are concerned about the Commission's inability to reconcile its declining workload and reduced number of

⁶ <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2013/2013-0038scy.pdf>

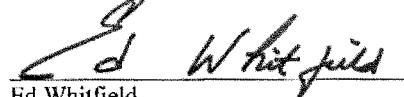
licensees with its erosion of schedule discipline. These dynamics compound the challenges to the economic viability of existing nuclear plants and inhibit future new plant development.

In order to better understand the NRC's budget and the apparent disconnect between improving industry safety trends, the decline in agency workload, and the decline in the timeliness of reviews. Please respond to the following questions by December 5, 2013:

1. What steps is the agency taking to identify declining workloads and numbers of licensees and propose corresponding resource reductions?
2. What role does the Chairman's office play in the identification of declining trends in agency workloads?
3. How is the NRC redistributing its resources in light of the reduction in workload in some areas?
4. Please provide a schedule with the dates estimated for the release of each outstanding volume of the Yucca Mountain Safety Evaluation Report.
5. Please provide an estimate of the resources necessary to fully comply with the DC Circuit's mandamus decision, complete the review of the Yucca Mountain license application, and issue a decision regarding construction authorization as mandated in the Nuclear Waste Policy Act.
6. Has the NRC submitted a supplemental budget request to the Office of Management and Budget? If not, when do you expect to do so?
7. Please provide a list of the costs billed each year to each applicant for the review of license renewal applications for the past 10 years including ongoing reviews.
8. Please provide a list of the costs billed each year to each licensee for the review of new plant COL applications for the past 10 years including previously issued and ongoing reviews.
9. Please provide a list of the costs billed each year to each applicant for the review of new design certification applications, amendments, and renewals for the past 10 years including previously issued and ongoing reviews.
10. Please provide a copy of any "lessons learned" reports examining the NRC's performance in reviewing the first new plant licenses in over 30 years.
11. Please explain what actions the Commission is taking to address shortcomings in meeting performance metrics for reviewing power uprate requests. Please provide a list of the costs billed to each licensee for the review of power uprate requests for the past 10 years including ongoing reviews. Please provide a list of power uprate requests that have been withdrawn, including how long those requests were under consideration and the costs billed to each licensee.
12. Please provide a statement on what principles and factors will guide the Commission's FY '15 budget deliberations.
13. In what way does the Commission seek to ensure that the budget appropriately adheres to the NRC's *Principles of Good Regulation*?

If you have any questions or concerns, please contact Annie Caputo of the Majority Committee staff at 202-225-2927.

Sincerely,



Ed Whitfield
Chairman
Subcommittee on Energy and Power



John Shimkus
Chairman
Subcommittee on Environment and
the Economy

Attachment

cc: The Honorable Fred Upton, Chairman

The Honorable Henry A. Waxman, Ranking Member

The Honorable Bobby L. Rush, Ranking Member
Subcommittee on Energy and Power

The Honorable Paul Tonko, Ranking Member
Subcommittee on Environment and the Economy



CHAIRMAN

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 9, 2013

The Honorable Ed Whitfield
 Chairman, Subcommittee on Energy and Power
 Committee on Energy and Commerce
 United States House of Representatives
 Washington, DC 20515

Dear Mr. Chairman:

On behalf of the U.S. Nuclear Regulatory Commission, I am responding to your letter of November 21, 2013, posing a number of questions and seeking information regarding various agency activities and expenditures. The Commission's responses and the data requested are enclosed.¹

The NRC strives to be an effective and efficient regulator; and we recognize that the regulatory activities we pursue to ensure safety and security must be well understood and clearly communicated. My fellow Commissioners and I look forward to appearing before you this week, at which time we would be happy to discuss with you the issues raised in your letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Allison M. Macfarlane".

Allison M. Macfarlane

Enclosure:
 As stated

cc: Representative Fred Upton
 Representative Henry A. Waxman
 Representative Bobby L. Rush
 Representative Paul Tonko

¹ Commissioner George Apostolakis did not participate in the development of the responses to Questions 4, 5, and 6.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

December 9, 2013

CHAIRMAN

The Honorable John Shimkus
Chairman, Subcommittee on Environment
and the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

On behalf of the U.S. Nuclear Regulatory Commission, I am responding to your letter of November 21, 2013, posing a number of questions and seeking information regarding various agency activities and expenditures. The Commission's responses and the data requested are enclosed.¹

The NRC strives to be an effective and efficient regulator; and we recognize that the regulatory activities we pursue to ensure safety and security must be well understood and clearly communicated. My fellow Commissioners and I look forward to appearing before you this week, at which time we would be happy to discuss with you the issues raised in your letter.

Sincerely,

A handwritten signature of Allison M. Macfarlane.

Allison M. Macfarlane

Enclosure:
As stated

cc: Representative Fred Upton
Representative Henry A. Waxman
Representative Bobby L. Rush
Representative Paul Tonko

¹ Commissioner George Apostolakis did not participate in the development of the responses to Questions 4, 5, and 6.

Identical letters sent to:

The Honorable Ed Whitfield
Chairman, Subcommittee on Energy and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

cc: Representative Fred Upton
Representative Henry A. Waxman
Representative Bobby L. Rush
Representative Paul Tonko

The Honorable John Shimkus
Chairman, Subcommittee on Environment
and the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

cc: Representative Fred Upton
Representative Henry A. Waxman
Representative Bobby L. Rush
Representative Paul Tonko

Mr. SHIMKUS. Thank you. Going forward, I will work with Chairman Upton and Chairman Whitfield to bring greater scrutiny of the NRC's abilities to manage its workload and to make decisions in a timely fashion.

[The prepared statement of Mr. Shimkus follows:]

PREPARED STATEMENT OF HON. JOHN SHIMKUS

We are holding this hearing today to conduct oversight of the Nuclear Regulatory Commission and to consider H.R. 3132, Chairman Terry's bill: the Nuclear Regulatory Commission Reorganization Plan Codification and Complements Act. The NRC's role in protecting public health and safety and the environment is a vital one and we take our oversight responsibility very seriously. Thank you, Commissioners, for making yourselves available today.

Earlier this year, on August 13, the U.S. Court of Appeals for the District of Columbia Circuit granted a writ of mandamus stating that "the Nuclear Regulatory Commission must promptly continue with the legally mandated licensing process" for Yucca Mountain. Yet it wasn't until November 18, three months later, that the commission finally issued an order directing the staff to proceed and resume the license review. While I largely agree with the commission's order, I question why it took so long and why some key budget and schedule information is still missing.

Given the commission's history on this topic, I wondered if the NRC was dragging its feet on this issue or if this is just the NRC's normal pace of operation. As it turns out, the NRC seems to be losing its schedule discipline in a number of areas like new plant licensing, license extensions, and power uprate reviews just to name a few.

That seems odd given the growth in the NRC's budget and personnel over the past 10 years, the reduced number of operating reactors, the decrease in materials licenses, and the withdrawal of many new plants licenses.

So on November 21, Mr. Whitfield and I sent you a letter asking for more information to help the committee understand how the growth in your budget and decreased workload HAS NOT fostered timelier decision-making. At this time, I'd like to ask that it be included in the hearing record together with the NRC's response.

Going forward, I will work with Chairmen Upton and Whitfield to bring greater scrutiny of the NRC's ability to manage its workload and to make decisions in a timely fashion.

Mr. SHIMKUS. And with that, I would like to yield the balance of my time to Congressman Terry from Nebraska.

OPENING STATEMENT OF HON. LEE TERRY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA

Mr. TERRY. Thank you, Mr. Chairman.

The independence of the nuclear safety regulator is paramount. This is one of the primary reasons why the Nuclear Regulatory Commission is comprised of five Commissioners, not a single administrator. In 1980, during consideration of how best to reorganize the NRC, one Congressman raised concerns about how tipping the balance of power too far in favor of the Chairman could have drastic consequences.

I am going to quote Democratic Congressman Toby Moffett from his testimony before the Senate Government Affairs Committee: "There will be two situations in the future, those where the Chairman is in basic agreement with the majority, then those where he or she is not. In those cases where the Chairman has a majority of Commissioners with or—with him or her, it is obvious that the Chairman will not need the extraordinary powers tucked away in his plan to work his or her will. The Chairman and the Commission can move in unison towards their chosen regulatory policy." Continuing, "But what about the other situation where the Chair-

man is in the minority, regardless of party affiliation within the Commission, when the majority of the Commissioners oppose the Chairman? Isn't it equally obvious that it will be at that moment that these special powers will be most appealing to the Chairman? Isn't it clear that if these powers are ever to be needed and utilized at all, it is precisely by a Chairman bent on going against the majority of the Commissioners?" During—end quote and end of his statement. During the previous chairmanship, we witnessed the turmoil that Mr. Moffett foresaw, turmoil that was documented at length by the NRC's Inspector General. While I know we are all glad to see the Commission functioning collegially as it is now and should be, it is incumbent upon us as legislators to do what we can to prevent this type of turmoil from recurring in the future. That concern is what prompted me to draft this bill, developed in large part from the Inspector General's conclusions and with the advice and counsel of the NRC itself. And I yield back.

Mr. SHIMKUS. The gentleman yields back his time. Is any member on the majority side seeking the last minutes? Without that, then I will turn to Ranking Member Mr. Tonko for a 5-minute opening statement.

OPENING STATEMENT OF HON. PAUL TONKO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. TONKO. Thank you. Thank you, Mr. Chairman. Good morning. And thank you to our participants at the witness table. It is great to have you before the committee.

We have quite a full roster of potential issues during the course of this hearing. Among these is the bill to amend the reorganization plan that lays out the structure and authorities of the Nuclear Regulatory Commission, and defines the roles of the Chair, the Commissioners and the NRC staff, that being H.R. 3132, which is offered by—authored by our colleague, Mr. Terry.

The nuclear power industry and the electric power sector in general are experiencing a number of significant changes, the low price and ready availability of natural gas is good news. Good news in many respects. But it is shifting the balance amongst different types of power generation. We have discussed the impacts on coal, but this is dynamic—but this dynamic has implications for nuclear power as well. Our nuclear fleet is aging. Several plants are to be decommissioned. Some are being relicensed. Construction is underway on several new plants. And as many members of this committee have noted, significant challenges with the permanent storage of nuclear waste are still with us.

In addition, the tragic situation at the Fukushima plant in Japan has reawakened some public concerns about nuclear power. These are all very important items and each worthy of examination on their own. And our subcommittee has focused on some of these in previous hearings.

In light of these important ongoing activities overseen by the Commission, I am skeptical of the need for H.R. 3132. The bill does not appear to address any real problems. And some of its provisions may indeed create new ones. The primary responsibility of the Commission is ultimately to ensure that the fleet of nuclear power plants is operating safely, and that nuclear materials are ac-

counted for and handled safely. There is no room for error. The public will not tolerate mishaps or accidents. And maintaining public safety and public confidence are essential if we are to continue to rely on nuclear power.

So as we proceed to consider H.R. 3132, that is the lens that we should use to examine the merits of this legislation. Quick, speedy response is often times called for. In addition to the central focus on safety, I would observe that reorganizations may at times be productive and useful exercises, but they divert time and attention away from the main mission of any organization undertaking this task.

Again, I am skeptical—skeptical, Mr. Cole, that such a diversion would be beneficial given the other important matters before this Commission. I understand that in the recent past, the working relationship among Commissioners was not good. That is a concern. But there are ways short of rewriting the Commission's operating rules to handle that type of problem. And, apparently, the problems have been resolved.

I believe that we should concentrate our efforts on solving problems that truly require a legislative solution. I am not convinced that H.R. 3132 can pass that test.

Thank you, Chairman Macfarlane and Commissioners Svinicki, Apostolakis, Magwood and Ostendorff for being here this morning. I appreciate the important work that you do. I look forward to your testimony and to our discussion this morning. And I would like to make available my remaining time. I yield to the gentleman from California, Mr. McNerney.

OPENING STATEMENT OF HON. JERRY MCNERNEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. MCNERNEY. Well, thank you, Mr. Tonko. And I thank the chairman for holding the hearing.

In addition to providing oversight for the Nuclear Regulatory Commission, we are here to discuss H.R. 3132, Mr. Terry's bill, to modify NRC's organizational structure and internal procedures. I do appreciate my colleague and friend's efforts on this. But I do have some concerns. Mr. Tonko already mentioned those concerns, which lead to the ability of the Commission to respond in emergency situations. I am afraid that the bill would hamper that. And I hope to hear whether that is confirmed or not by the members of the Commission this morning.

Another issue of the NRC's purview is nuclear waste facilities include Yucca Mountain. We heard from Secretary Moniz in July that he believes a consent based citing process makes sense. That is important in terms of public support for particular project. I agree wholeheartedly. We need to be able to discuss and address safe technologies for transfer and storage of nuclear materials as well. All of these issues are important for any nuclear project that may occur in the future. And we should take every effort to make sure that they are addressed as we go forward.

My time is expired.

Mr. SHIMKUS. The gentleman's time has expired. The gentleman yields back. The Chair now recognizes the chairman of the Energy and Air Quality Committee, Mr. Whitfield, for 5 minutes.

OPENING STATEMENT OF HON. ED WHITFIELD, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF KENTUCKY

Mr. WHITFIELD. Thank you, Chairman Shimkus. And I also want to thank you, Chairwoman Macfarlane and other members of the Commission, for being with us today. And we certainly appreciate the important work that you are involved in.

I would like to just point out that we attempted to set up this hearing beginning in August. And I know everyone has very busy schedules. But I hope that your Chief of Staff will work with us in the future. Ms. Macfarlane, I know that we had set some dates that were not agreeable to all the Commissioners, and your staff got back to us, suggested a date in which we were not even in session. And as I said, I know we all have very busy schedules. But I hope that we can work together to facilitate these hearings.

Also, I read recently that Senator Boxer was being very critical of the travel budget for the Commission. And I would say that I think it is vitally important that you all do adequate travel, because I think the expertise that we have in the U.S. on nuclear issues and nuclear safety is better than any place else in the world. So I think it is important that we continue to share our expertise. And if—I would also say that if Senator Boxer is concerned about the travel budget, I can't imagine what she must be thinking about the fact that we spent \$14 or \$15 billion on Yucca Mountain and it is still not open. And then on top of that, the judgments against the Federal Government for not being able to take that waste, and—but, obviously, since Fukushima, you all have been very much focused on safety issues, as you should, because we want to ensure the American people that nuclear energy is safe and that we need nuclear energy. We must have it. But I do believe that additional regulatory costs should be justified by real safety benefits.

Chairman Shimkus mentioned in a letter in November that we sent, we point out that the NRC staffing has grown 29 percent over the past 10 years. And the fees recovered from licensees and, hence, their customers, has increased 58 percent. As we examine this further, we also found in its annual review of the industry's long term safety trends, the NRC reported it has not identified any statistically significant adverse trends in the industry safety performance. And that is commendable. And we are all pleased with that. But in spite of that, there are 58 new regulations pending. And then the NRC received applications for 28 new reactors. Licenses were issued to build 4, and licenses for 16 reactors have been withdrawn or suspended. Yet, the NRC continues to cite budget constraints and delay in their reviews. So I do agree with Chairman Shimkus that there seems to be an apparent disconnect between the growth of the NRC's resources and what appears as a declining workload.

Yet, we look forward to your comments today on the issues that you deem important. And we certainly look forward to the opportunity to ask some questions, and certainly look forward to hear—

work with you as we move forward. And so I—Mr. Barton—I yield the balance of my time to Mr. Barton.

[The prepared statement of Mr. Whitfield follows:]

PREPARED STATEMENT OF HON. ED WHITFIELD

The NRC's role in protecting public health and safety and the environment is a vital one: one that I strongly support and one that should be adequately funded. However, as I've pointed out to you all in the last two appearances before our sub-committees and in the wake of the Fukushima nuclear accident, I firmly believe that any additional regulatory costs should be justified by real safety benefits. I urge you all to remember that the costs of regulatory changes are ultimately born by consumers.

Also, as Chairman Shimkus and I recently pointed out in a November letter, the NRC's staffing has grown 29 percent over the past 10 years and the fees recovered from licensees, and hence their customers, has increased 58 percent. As we examined this further, we also found:

- In its annual review of the industry's long-term safety trends, the NRC reported it has not identified "any statistically significant adverse trends in industry safety performance". Yet there are 56 regulations pending.
- NRC received applications for 28 new reactors. Licenses were issued to build four, and licenses for 16 reactors have been withdrawn or suspended. Yet, the NRC cites budget constraints and delays their reviews.

So, I agree with Chairman Shimkus that there seems to be an apparent disconnect between the growth in the NRC's resources and what appears as a declining workload. We believe these concerns warrant more scrutiny and I expect to delve deeper into these issues going forward.

Mr. BARTON. I appreciate that. Welcome to the Commission, and I yield back.

Mr. SHIMKUS. So the gentleman yields back his time. The minority has asked me that when Ranking Member Waxman shows up that I allow him to do his opening statement, which I will allow him to do. I think the same courtesy will be given for Chairman Upton if he were to show. There are competing hearings. So we want to welcome the Commission.

Part of the challenge is always getting the pronunciations of the names right. So with us today is Chairman Macfarlane, Commissioner Svinicki. And if I am the butcher, let me know. Commissioner Apostolakis, Commissioner Magwood—probably the easiest one—and Commissioner Ostendorff. So for my colleagues, we will try to get that right without too much challenges.

And now, just welcome. You all will get a chance to do a 5-minute opening statement. Your written testimony is on file.

We will start with Chairman Macfarlane. You are recognized for 5 minutes. Thank you and welcome.

STATEMENTS OF ALLISON M. MACFARLANE, CHAIRMAN, NUCLEAR REGULATORY COMMISSION; KRISTINE L. SVINICKI, COMMISSIONER, NUCLEAR REGULATORY COMMISSION; GEORGE APOSTOLAKIS, COMMISSIONER, NUCLEAR REGULATORY COMMISSION; WILLIAM D. MAGWOOD IV, COMMISSIONER, NUCLEAR REGULATORY COMMISSION; AND WILLIAM C. OSTENDORFF, COMMISSIONER, NUCLEAR REGULATORY COMMISSION

STATEMENT OF ALLISON MACFARLANE

Ms. MACFARLANE. Good morning. Is this on? Yes. Good. OK. Morning, Chairman Whitfield, Chairman Shimkus, Ranking Member Tonko and distinguished members of the subcommittees.

My colleagues and I appreciate the opportunity to appear before you today on behalf of the U.S. Nuclear Regulatory Commission. The NRC continues to have a full plate of regulatory responsibilities from the operation and decommissioning of reactors to nuclear materials, waste and security.

The Commission continues to function effectively and collegially. Today, I would like to share a few highlights of our accomplishments and challenges.

The safe and secure operation of the NRC's licensed facilities and materials remains our top priority. The vast majority, as Chairman Whitfield noted, of operating reactors in the United States are performing well, while a few warrant enhanced oversight to ensure their safe and secure operation. Construction of the new units at the Vogtle and V.C. Summer sites is well underway under rigorous NRC inspection. Construction also continues at Watts Bar Unit 2, and the staff is currently working toward an operating licensing decision for that plant in December 2014. We are also anticipating submittal of the first design certification applications for small modular reactors next year.

This year, several reactors have shut down or announced their decision to cease operations. At these plants—as these plants transition from operation to decommissioning, the NRC will adjust its oversight accordingly and ensure the next steps are safely addressed while keeping the public informed. The NRC has acted expeditiously to comply with the August 13, 2013, DC Circuit Court of Appeals decision directing us to resume review of the Yucca Mountain license application. The Commission carefully reviewed feedback from participants to the adjudicatory proceeding, and budget information from the NRC's staff. And on November 18, the Commission issued an order directing the staff to, among other things, complete the Safety Evaluation Report for the Department of Energy's Yucca Mountain construction authorization application.

The project planning and building of the technical capability at the NRC is now underway. I must note that on several matters related to our review of DOE's Yucca Mountain license application, my colleagues and I may not be able to comment due to pending Motions before the Commission and indications that participants to the adjudication may seek further relief in Federal court.

The NRC also continues to make progress in its waste confidence work. The proposed temporary storage rule and draft generic environmental impact statement are out for public comment until De-

cember 20. We have conducted 13 public meetings in 10 States to get feedback and address questions. To date, the Agency has received over 30,000 public comments.

In the interim, the NRC continues to review all affected license applications. But we will not make a final licensing decision dependent upon the waste confidence decision until the Court's remand has been fully addressed. We continue to address lessons learned from the Fukushima Daiichi accident and implement appropriate regulatory enhancements. Among other things, licensees have purchased and emplaced backup equipment at reactor sites, installed supplemental flood barriers and pumps to mitigate extensive flooding, and are developing plans to install hardened vents and improved spent fuel pool instrumentation.

We are also making progress on several important rule makings. We are carefully ensuring that this work does not distract us or the industry from the day-to-day nuclear safety priorities. The highest priority safety enhancements will be implemented by 2016. The NRC has held more than 150 public meetings to get input on our Fukushima work and share progress. The NRC managed the fiscal year 2013 sequestration cuts such that they did not adversely impact the Agency's ability to carry out normal operations. However, if sequestration continues in 2014, it will negatively impact our research, new reactor work and nonemergency licensing activities, among other responsibilities.

The recent government shutdown also had a detrimental impact on the NRC's operations. The Agency's safety and security mission, including ongoing inspection at our licensees' facilities and emergency response capabilities, was never in jeopardy. Furthermore, with prudent use of carryover resources, we were able to limit the impact of the shutdown relative to other agencies. This said, even a 4-day furlough of 93 percent of our staff cost the Agency more than \$10 million in lost productivity.

While we have accomplished a great deal, many challenges are still ahead for the NRC. I am confident that we will be able to address these and other issues in the coming months. I would be pleased now to answer your questions.

[The prepared statement of Ms. Macfarlane follows:]

WRITTEN STATEMENT
BY ALLISON M. MACFARLANE, CHAIRMAN
UNITED STATES NUCLEAR REGULATORY COMMISSION
TO THE
HOUSE COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEES ON ENERGY AND POWER, ENVIRONMENT AND THE ECONOMY
DECEMBER 12, 2013

Good morning, Chairman Upton, Ranking Member Waxman, Chairman Whitfield, Ranking Member Rush, Chairman Shimkus, Ranking Member Tonko, and distinguished members of the Subcommittees. My colleagues and I appreciate the opportunity to appear before you today on behalf of the U.S. Nuclear Regulatory Commission (NRC).

Since the Commission's last appearance before the joint Subcommittees on February 28, 2013, the NRC has continued to ensure the safety and security of the Nation's civilian nuclear activities, made enhancements based on lessons learned from the Fukushima Dai-ichi accident, and met challenges in other areas. In doing so, my fellow Commissioners and I continue to work collegially to carry out the NRC's mission of protecting public health and safety and the environment and promoting the common defense and security. I continue to value greatly the NRC staff's expertise and dedication to our mission.

Since joining the Commission, I have had the opportunity to visit each of the NRC's four regional offices, as well as seven nuclear power plants and several other licensed facilities. These visits have reinforced my belief that the agency's high caliber and dedicated staff of experts is ably fulfilling our critical mission. The NRC's resident inspectors give me particular confidence that the agency is protecting the public's health, safety and security. In short, I believe the NRC is operating very well. We are successfully meeting the variety of challenges

we face while also seeking to continuously improve in order to remain a strong and effective regulator.

Today, I'd like to highlight some of the NRC's accomplishments and challenges since last winter.

OPERATING REACTOR FLEET

The day-to-day safe and secure operation of the NRC's licensed facilities, including power reactors, and the safe and secure use of materials remains our top priority. All operating reactors in the United States are performing safely. The NRC's Reactor Oversight Process bins each plant according to its performance into one of five "columns" in what we call the Action Matrix. Column 1 consists of those reactors that we have assessed as having the best level of safety and security performance. On average, these plants receive a baseline level of approximately 2,370 hours per site of direct inspection effort, per year, with an additional approximately 2,420 hours per site for all associated monitoring of plant status, preparatory work, and inspection documentation. Plants in Columns 2, 3, and 4 receive successively increasing levels of NRC oversight, characterized by significantly enhanced inspection. Plants in Column 4 receive the most NRC attention short of a mandated shutdown. Column 5 includes those plants that are experiencing problems of sufficient safety significance as to require a shutdown until the problems are addressed.

On September 6, 2013, the NRC issued its calendar year 2013 mid-cycle assessments for all operating power reactors in the United States. These results document the plants' performance through the first half of 2013. There are currently 78 reactors in Column 1; 14 in Column 2; seven in Column 3; and one, Browns Ferry Unit 1, in Column 4. The NRC is working closely with the plants in the lower performance categories to conduct follow-up inspections of identified issues and ensure that corrective actions are implemented.

The Fort Calhoun Nuclear Generating Station, located in Nebraska, remains under special inspection oversight, separate from the normal performance categories, as a result of licensee performance problems stemming from an inadequate flood strategy discovered prior to experiencing severe flooding from the Missouri River and discovery of a design issue that resulted in a fire after the flood. The plant has been shut down since experiencing the severe flooding in May 2011. The licensee continues to pursue activities to prepare Fort Calhoun for restart. The NRC continues to assess and inspect the licensee's progress and will only authorize restart if the licensee has shown that it can operate the plant in a manner that provides for adequate protection of public health and safety.

With respect to the rest of the power reactor fleet, the NRC has approved license renewals for 74¹ reactors, most of which have already replaced, or plan to replace, major components such as reactor pressure vessel heads or steam generators. The NRC also reviews aging management programs for each licensed facility seeking license renewal. License renewals impacted by the Commission's Waste Confidence activities will remain pending until the conclusion of those activities, which I will discuss in greater detail later in these remarks.

NEW CONSTRUCTION

Following the issuance of the first Combined Licenses for new reactors at the Plant Vogtle and V.C. Summer stations approximately 20 months ago, safety-related construction at both facilities is well underway. There were some initial delays after NRC inspectors identified code compliance issues with the design of the basemat² and walls, which resulted in pouring concrete for the nuclear island basemats later than originally planned. The NRC issued license amendments to address these issues, and the basemats have now been placed at all four sites.

¹ Including one for the Keweenaw Power Station, which has since shut down.

² The basemat is the reinforced concrete foundation for the "nuclear island," which consists of the containment building, shield building, and auxiliary building.

The auxiliary building walls at Summer Unit 2 and Vogtle Unit 3 are being constructed, the bottom portions of both containment vessels have been set, and the reactor vessels are on-site. In addition, significant progress has been made on major structural modules, the turbine buildings, and cooling towers at both sites. Other issues identified by NRC inspectors have been in the area of civil construction and digital instrumentation and control. Both sites experienced issues with the delivery and quality of the fabrication of plant modules, but overall, construction appears to be going smoothly. I had the opportunity to visit the Plant Vogtle site in June 2013 and was impressed with the significant progress being made at the site, as well as with the effective communication between the NRC and the licensee to ensure that previously-identified issues are being addressed appropriately.

The reactors under construction at the Vogtle and Summer sites are the first of a new generation of reactors built under the regulations in 10 CFR Part 52. These regulations allow applicants to seek a combined license covering nuclear power plant construction and operation and permit the use of a pre-approved standardized design. On one hand, the streamlined approach of issuing one license is intended to minimize potential delays in bringing new plants online, but in turn, licensees must construct the plant in accordance with the approved design referenced in the license application. The lessons learned at V.C. Summer and Plant Vogtle will inform our work in new reactor licensing and construction oversight going forward. We intend to continue to work with licensees and vendors to ensure that they fully understand our expectations regarding as-built design detail and the finality of the approved design.

The NRC also continues to provide construction oversight at Watts Bar Nuclear Plant Unit 2. The NRC staff review of Tennessee Valley Authority's (TVA's) submittals related to the Operating License Application of Watts Bar Unit 2, while mostly complete, is still in progress. The NRC staff continues to document its findings in supplements to the safety evaluation report, and construction inspection reports to ensure that TVA has met the applicable

regulatory requirements. Currently, the staff is working towards an operating licensing decision in December 2014.

The NRC also anticipates the submission of the first design certification applications for small modular reactors (SMR) in 2014, for the Westinghouse SMR and Babcock & Wilcox mPower designs. We have ensured that we are appropriately staffed to conduct these SMR design certification reviews in a timely manner.

DECOMMISSIONING

Since we last appeared before the joint Subcommittee, four reactors have announced their intention to cease commercial operations and permanently shut down due to a variety of factors. Keweenaw Power Station; Crystal River Nuclear Generating Plant, Unit 3; and Units 2 and 3 of the San Onofre Nuclear Generating Station entered decommissioning following announcements earlier this year. More recently, in late August, Entergy announced its intention to close the Vermont Yankee nuclear power plant by the end of 2014.

Our licensees have three decommissioning options from which to choose under NRC regulations: DECON, or immediate dismantlement; SAFSTOR, or deferred dismantlement; and ENTOMB, in which radioactive contaminants are permanently encased on site. To date, no NRC licensee has selected the ENTOMB option. Our regulations require that decommissioning be completed within 60 years of cessation of operations. As these plants transition from operating to decommissioning, the NRC will adjust its oversight accordingly and ensure the next steps are carried out safely, while keeping the public informed of the process.

YUCCA MOUNTAIN

The NRC has acted expeditiously to comply with the August 13, 2013, U.S. Court of Appeals for the District of Columbia Circuit decision directing the NRC to promptly continue with the legally mandated licensing process for the high-level waste repository at Yucca Mountain,

Nevada. On August 30, the Commission issued an Order requesting that all parties to the suspended Yucca Mountain adjudication provide their views within 30 days on how the NRC should continue with the licensing process. At the same time, we also directed the NRC staff to gather budget information that would provide current data on the cost of completing various aspects of the licensing process.

On November 18, 2013, the Commission issued an Order directing the NRC staff to complete work on the safety evaluation report on the Department of Energy's construction authorization application for the proposed Yucca Mountain nuclear waste repository. The Commission also requested that DOE prepare a supplemental environmental impact statement, needed by the NRC staff in order to complete its environmental review of the application. The Commission did not direct the staff to reconstitute the Licensing Support Network (LSN) that supported the adjudicatory hearing on the application, but did direct the staff to load documents in the LSN collection into the NRC's non-public ADAMS online database. The Order acknowledges that documents used as references in the safety evaluation report and supplemental environmental impact statement will be publicly released; however, public release of all LSN documents will depend on whether sufficient funds remain available to do so.

The Commission also directed that the adjudication related to the Yucca Mountain license application continue to be held in abeyance. The Commission has received one motion to reconsider aspects of its decision and another requesting clarification of other portions. The NRC will continue to keep our Congressional oversight committees fully informed through monthly activity and status reports of our progress in responding to the court's direction to the agency to continue its review of the Yucca Mountain application at least until existing funds appropriated for the review are expended.

WASTE CONFIDENCE

Following the U.S. Court of Appeals' June 2012 remand of the Waste Confidence Rule, the Commission directed the NRC staff to address the issues identified in the court's remand by September 2014. The proposed Waste Confidence Rule and draft generic environmental impact statement, prepared in response to Commission direction, are available for public comment until December 20, 2013. To supplement the public comment period, the NRC has provided multiple opportunities for public involvement in this process. We held 13 public meetings at various locations around the country: two at NRC's Headquarters; Denver, Colorado; Chelmsford, (near Boston) Massachusetts; Tarrytown (north of Manhattan), New York; Charlotte, North Carolina; Orlando, Florida; Oak Brook (near Chicago), Illinois; Carlsbad, California; San Luis Obispo, California; Perrysburg (near Toledo), Ohio; and Minnetonka (near Minneapolis), Minnesota. We also held a final, teleconference-only meeting based out of our Rockville, Maryland Headquarters.

As the staff continues its work on Waste Confidence, the NRC continues to review all affected license applications. However, we will not issue licenses dependent upon the Waste Confidence Decision or the Temporary Storage Rule, such as combined licenses or license renewals, until the court's remand is appropriately addressed. This determination extends just to final license issuance; all licensing reviews and related proceedings continue to move forward.

FUKUSHIMA

Two and a half years after the Fukushima accident, the NRC and the international community have a more informed understanding of the event sequence and the work necessary to implement safety enhancements based on lessons learned. Additionally, based on lessons learned from the Three Mile Island accident, we are committed to appropriately prioritize and integrate the Fukushima lessons learned to ensure that they do not create an adverse impact on the agency's other safety-significant work. We are taking the time necessary to conduct

detailed research, develop comprehensive regulatory requirements, if necessary, and seek input from a broad array of constituents, to ensure that the actions we are taking are technically sound and provide the most appropriate safety enhancements.

I am pleased to report that we have done extensive inspections at each U.S. nuclear power plant and that the Commission remains confident that the fleet continues to operate safely. The additional actions we are requiring will enhance licensees' abilities to mitigate the effects of a beyond design-basis accident. The licensees have also conducted thorough "walkdown" inspections at their facilities, are in the process of re-evaluating their seismic and flooding hazards, and are making significant progress in implementing the new requirements stemming from the Fukushima lessons learned.

Recently, there has been increased focus on water contamination at the Fukushima site, in part because of leakage in one of the tanks built to store highly contaminated water on the site. To help clarify the situation: the greatest releases of radioactivity occurred in the days immediately following the accident. While the uncontrolled release of contaminated water remains an issue of great concern for the Japanese public, the radionuclide concentrations in the current releases are orders of magnitude lower than the immediate, post-accident releases that occurred in March 2011, as well as orders of magnitude lower than international dose standards. The NRC continues to work closely with its counterpart, the Japan Nuclear Regulation Authority, at both the Commission and staff levels. Together with other U.S. Government agencies, we have offered our assistance and remain in frequent contact with our counterparts to ensure we maintain up-to-date information about the situation.

Based on information available to the NRC, there are no public health and safety impacts for the United States as a result of water contamination from the Fukushima site. The U.S. Environmental Protection Agency, the Food and Drug Administration, and the National Oceanic and Atmospheric Administration are the lead federal agencies on this matter and are closely monitoring the situation and, based on the information provided by these agencies and

other reliable sources, we are confident that radionuclide concentrations in samples of water and seafood off the coast of Fukushima are each well below levels that require action to be protective of public health and safety. We are therefore confident that the U.S. Hawaiian and mainland coastlines are not at risk. The NRC has issued a fact sheet available on our website that provides additional information to the public on the current situation in Japan.

In terms of our efforts to implement high-priority, safety-significant lessons learned at operating nuclear facilities in the United States, I would like to summarize the progress the NRC and our licensees have made.

Seismic and Flooding Evaluations and Inspections

Following the accident, the NRC moved swiftly to require reactor licensees to confirm their capability to protect against seismic and flooding events within the plant's current design basis. In November 2012, the licensees submitted their final reports, which are being reviewed by the NRC staff. The NRC is also inspecting the licensees' performance. At this time, no issues identified by the licensees or the NRC raise safety concerns. A few plants reported some discrepancies in flood protection such as: degraded flooding seals; procedure deficiencies; and temporary flood barriers that may not have performed as designed should they have been called upon to function. Examples of potential seismic issues included degraded equipment or hardware (e.g., missing bolts, corrosion), potential for spatial seismic interactions, and problems associated with housekeeping procedures. The licensees are correcting these issues in a timely manner under NRC oversight. To confirm licensees conducted the "walkdowns" correctly, NRC staff conducted audits this past summer at select plants and sites to gather additional information. As the next step, the NRC will complete detailed safety assessments of each of the licensees' walkdown reports and will issue those assessments later this month.

Seismic and Flooding Reevaluations

To ensure adequate protection against natural hazards, the NRC is requiring the licensee for each plant to use current methodologies and updated regulatory guidance to reevaluate seismic and flooding hazards and then evaluate the plant response to those hazards. The NRC will use the results of these assessments to determine whether additional site-specific safety enhancements are necessary.

For the flooding hazard reevaluations, the NRC categorized the plants based on factors such as the complexity of the analyses required, co-location with a site considering a new reactor application and the potential for needing an integrated assessment of the re-evaluated hazard to the current design basis. Sixteen sites have already provided the results of their reevaluated flood hazard, and the others are on a staggered deadline schedule through March 2015.

Sites with reevaluated hazard results that are bounded by their current design basis do not need to take further action. Licensees whose flooding hazard reevaluation results are not bounded by their current design basis were requested to describe any interim actions, taken or planned, to address the reevaluated flooding hazard. In addition, these sites must complete an assessment of the site's flood protection and mitigation capability within two years of submitting the hazard reevaluation results to determine whether permanent safety enhancements are necessary.

At present, the NRC is reviewing the interim actions for flooding that were proposed for individual sites and is performing on-site inspections to ensure that the interim actions are protective of public health and safety. Concurrently, the NRC is reviewing the flood hazard reevaluation results submitted by the licensees to ensure they correctly utilized current methodologies. Of the licensees that submitted their hazard reevaluations on March 12, 2013, the majority have identified hazards that are greater than their current design basis and this will require them to take further action.

Seismic hazard assessments are on a separate schedule, and work is well underway at the plants. Licensees have begun the process of performing the analyses necessary to reassess the seismic hazards for their facilities. In establishing the methodologies for performing this reassessment, the NRC and industry concluded that ground motion models for plants in the central and eastern United States should be updated. These ground motion model updates were completed at the end of May of this year and approved by the NRC staff in August for licensees to use in the reassessment of the seismic hazards. Licensees whose plants are located in the central and eastern United States have recently submitted to the NRC a portion of their hazard reassessments and will submit the complete reevaluations by March 2014. Licensees whose plants are located in the western United States are scheduled to submit their hazard reevaluations by March 2015. Because the U.S. Geological Survey recently updated seismic hazards for the central and eastern United States, plants in those areas could incorporate this new data directly. Licensees for the three sites in the western United States must conduct significant additional research in order to submit their seismic hazard reassessments.

As an interim step to implement safety enhancements more quickly than originally scheduled, the NRC and industry have developed a revised approach to upgrade certain safety systems at the facilities. Licensees will now use their updated seismic hazard assessments to identify and implement seismic upgrades to certain safety significant equipment. Previously, they were to conduct comprehensive plant risk analyses before determining what upgrades may be necessary. This change allows for certain seismic-related safety enhancements to be completed at the sites sooner than originally planned, with many plants completing safety enhancements by 2016. The NRC will still require licensees to complete the seismic probabilistic risk assessments to determine if any further safety enhancements are warranted.

Enhanced Capabilities to Mitigate Beyond-Design-Basis Accidents

To ensure that sites are better prepared to respond to beyond-design-basis accidents, the NRC has required licensees to provide additional capabilities to maintain or restore core cooling, containment, and spent fuel pool cooling for all units at a site simultaneously following an extreme natural event. This includes procurement of portable power supplies, cooling pumps, and supporting equipment to supplement the existing plant safety systems. To implement these requirements, in February 2013, the licensees submitted their integrated safety plans for NRC approval. They have begun to procure the equipment at their sites. Most of the sites with operating reactors will achieve full implementation by the end of 2015, with the remaining sites to be completed by 2016. The industry is also establishing Regional Support Centers in Memphis, Tennessee and Phoenix, Arizona with the capability to deploy equipment to any reactor site within 24 hours. These Centers will be fully operational by the end of 2014. During and after implementation, the NRC will conduct inspections to verify that nuclear power plants have put appropriate strategies in place to mitigate beyond design-basis accidents.

The NRC is conducting a rulemaking that would impose new requirements similar to those already imposed in a March 2012 Order to mitigate a prolonged station blackout condition. This rulemaking will incorporate feedback and lessons-learned from implementation of the previously imposed Order to inform the new requirements to enhance capabilities to mitigate beyond-design-basis accidents at the sites. This rulemaking remains on schedule to be completed by 2016. As with all regulatory requirements, the licensees will be required to comply with the final rule.

Emergency Preparedness

To ensure that nuclear power plant sites have adequate staffing and sufficient communication capacity in place to cope with prolonged accident conditions, particularly involving multiple units, the NRC requested that licensees reassess their emergency response capabilities. This includes examining staffing plans, conducting periodic training for staff on

multi-unit accident scenarios, and ensuring that communication equipment can function during a prolonged loss of power at the site. Licensees are performing these activities and are required to complete them by 2016. Portions related to staffing and communications have already been completed and submitted to the NRC. The NRC staff has issued safety assessments concerning the communications portion to operating licensees. The staff will follow up with licensees to confirm that the enhancements to the sites' communication systems are completed. The NRC is conducting a rulemaking to integrate emergency operating procedures, severe accident management guidelines, and extensive damage mitigation guidelines. This rulemaking will require these safety procedures to be effectively implemented in a coordinated manner during a nuclear accident. The new requirements will better equip licensees to address accidents outside of a plant's current design basis, and promote proper training to address these scenarios. This rulemaking remains on schedule to be completed by 2016. The NRC will then ensure that the licensees take the actions specified in the final rule.

Spent Fuel Pool Instrumentation

To ensure the capability to continuously monitor spent fuel pool water levels and conditions during an extreme event, the NRC has required by Order the installation of enhanced instruments at all nuclear plants. This additional equipment expands upon the capabilities of that which is currently installed and will indicate the full range of water level above the spent fuel assemblies. Licensees must complete installation of this instrumentation along with the installation of the enhanced spent fuel pool cooling capabilities, with full implementation at all sites by 2016. Licensees submitted their integrated safety plans to implement this requirement in February 2013. The NRC is in the process of reviewing those safety plans, and will issue interim staff evaluations by the end of 2013. The NRC will also issue final safety evaluations and inspect each site to verify that the licensees have appropriately implemented this requirement.

Reliable Hardened Vents

To protect containment integrity in the 31 boiling water reactors with Mark I and II containments, similar in design to those found at Fukushima Dai-ichi, the NRC required by Order installation of reliable hardened vents capable of relieving high pressure in the reactor containment. In response, licensees submitted their plans for implementing this requirement in February 2013. These requirements were initially on the same schedule as those just described, with full implementation scheduled for 2016. The Commission subsequently directed the staff to expand those requirements to ensure that the vents can be operated during severe accident conditions. The NRC issued new requirements for operation of vents in June 2013. These include a revised schedule requiring licensees to submit implementation plans in June 2014 and have in place severe accident capable venting systems by June 2017.

The Commission also directed the NRC staff to undertake a rulemaking to consider additional requirements for these reactors to retain and filter radioactive material during an accident and enhance the capability to maintain containment integrity and cool core debris. In keeping with NRC rulemaking practices, there will be multiple opportunities for public participation in the process.

Spent Fuel Pool Study and Expedited Transfer Issues

Although inspections of the Fukushima Dai-ichi facility determined that spent fuel pool integrity had been maintained and the spent fuel had been adequately cooled during the accident, the event led the NRC staff to undertake efforts to confirm the safe storage of spent fuel and to determine whether the NRC should undertake a regulatory action to require expedited transfer of spent fuel to dry cask storage at U.S. nuclear power plants. In the summer of 2011, the NRC staff initiated a research project entitled, "Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor." The study used the Peach Bottom plant in Pennsylvania as a "reference plant." A draft of the study was completed and the NRC solicited public comment on the report in July

2013. The final report was completed and made available to the public in October 2013. The staff also undertook a generic assessment – looking at all reactor types and various initiating events – to determine if the potential safety benefits of reducing the amount of spent fuel stored in storage pools would: (i) meet the NRC's criteria for a substantial safety improvement at existing nuclear power plants; and (ii) meet criteria for a cost-justified safety improvement for future nuclear power plants. The Commission is evaluating the staff's assessment and proposal and will make a decision after our January 6, 2014 public meeting on the issue.

National Academy of Sciences Study

As directed by Congress, the NRC issued a grant to the National Academy of Sciences (NAS) to provide an assessment of lessons learned from the Fukushima nuclear accident for improving the safety and security of nuclear plants in the United States. This assessment will address the following issues: (1) causes of the Fukushima nuclear accident; (2) re-evaluation of the conclusions from previous NAS studies; (3) lessons to improve plant safety and security systems and operations; and (4) lessons to improve plant safety and security regulations, including processes for identifying and applying design basis events for accidents and terrorist attacks to existing nuclear plants. The NRC staff is providing the assistance needed to support NAS' completion of the report in mid-2014.

Longer-Term Actions Associated with Fukushima Lessons Learned

The end of 2016 will mark an important milestone for the NRC to measure its progress in implementing the lessons learned from the Fukushima accident. The summary provided thus far has shown the significant progress that the agency has made or will make by this date. We have focused on the highest priority, most safety-significant lessons learned first. The agency will meet or exceed the five year goal in completing the most safety-significant enhancements.

Over the coming months and years, as we gain insights from implementation of the highest priority actions, related activities at the Fukushima Dai-ichi site, and resources become available with the critical skill sets, the schedules for disposition of the remaining lessons

learned will become clearer. The NRC remains committed to implementing the appropriate Fukushima lessons learned in an effective, timely, and safety-focused manner and without adverse impact on the agency's other safety-significant work.

The NRC continues to interact with our licensees and interested members of the public as we move forward to implement these Fukushima safety enhancements. We have held more than 150 public meetings over the last two and a half years in an effort to keep the public apprised of our activities. We remain mindful of the cumulative effects of regulation and have established a process that attempts to manage cumulative impacts. The NRC is taking a careful and deliberate approach to this work to prevent these regulatory actions from distracting us or the industry from day-to-day nuclear safety priorities, and to avoid unintended safety or security consequences. We recall the lessons learned from previous events such as the September 11, 2001, terrorist attacks, knowing that a change in one system has the potential to adversely affect another system if not considered holistically.

SECURITY

On October 11, the NRC concluded a two-week International Atomic Energy Agency (IAEA) International Physical Protection Advisory Service (IPPAS) mission. An international team of security experts reviewed the NRC's physical protection regulations, as well as how they are implemented at the National Institute of Standards and Technology's (NIST) Center for Neutron Research in Gaithersburg, Maryland. The IPPAS team concluded that "nuclear security within the U.S. civil nuclear sector is robust and sustainable and has been significantly enhanced in recent years." The NRC has recently revised its regulations related to the physical protection of spent fuel in transit. We have also recently issued a new regulation, 10 CFR Part 37, which provides expanded security measures for the physical protection of the most risk-significant radioactive materials. In January 2013, we began the first round of inspections of power reactor licensees' cyber security plans and implementation. To date, we have completed

16 such inspections, and are now evaluating possible cyber security requirements for fuel cycle facilities.

INTERNATIONAL

International cooperation remains a priority for the NRC. We remain engaged on a bilateral and multilateral basis with our international counterparts on safety, security, and safeguards issues. We are currently preparing for the Sixth Review Meeting of Parties to the Convention on Nuclear Safety, which will take place in March 2014.

SEQUESTRATION AND GOVERNMENT SHUTDOWN

The sequestration that took effect March 1, 2013, required the NRC to manage a reduction in its operating budget of approximately \$52 million in fiscal year 2013. While these required cuts did cause delays in licensing new nuclear facilities and the deferral or elimination of research to refine or enhance analytical tools, the sequestration did not adversely impact the agency's ability to continue carrying out normal operations and fulfilling its core safety and security mission. Further, we did not impose any furloughs on our staff. If sequestration continues in fiscal year 2014, the Commission will be faced with implementing more austere reductions that will have long-term impacts on important NRC programs, and could adversely impact our new reactor work, research, and non-emergency licensing activities such as power uprates, license renewal, and uranium recovery, among other functions.

This noted, the NRC has an established process to execute our appropriated resources as wisely as possible. This process is an add/shed/defer approach whereby the agency identifies and reprioritizes existing or planned work when emergent items of higher priority are assigned, when there is a shift in workload priorities, when licensees or applicants change their plans, or when the realized impact of work is greater than what was budgeted. "Fact-of-life" changes frequently occur and result in the need to re-evaluate plans and resources. When

there is a reduction of workload, the agency uses this established process to evaluate how resources should be reallocated to support emergent work.

This process was used to address the decision made by the Commission to respond to the court decision on Waste Confidence. This process will also be used if additional reductions are necessary due to sequestration and to make adjustments for unplanned shutdown of plants.

Finally, recent fiscal realities demand that we adapt to the best of our abilities to protect our core safety and security missions. This said, the recent government shutdown had a detrimental impact on the NRC's operations. I note that, thanks to careful planning and the availability of carryover funding, the NRC was able to remain open until October 10. In addition, I must emphasize that the agency's safety and security mission, including presence at our licensed facilities and emergency response capabilities, was never in jeopardy. However, the week-long furlough of 93 percent of our 4,000-person staff resulted in delays in non-emergency licensing actions; the cancellation or postponement of public meetings; and a backlog of other important work. We estimate that the total productivity cost to the agency due to the period of elapsed appropriation exceeds \$10 million.

The NRC staff is a talented, dedicated team that takes pride in its public service and its ability to complete work in a thorough and timely manner. The uncertainty and worry the shutdown caused for the men and women of our agency, and all federal agencies, were unfortunate.

INTERNAL COMMISSION PROCEDURES

The NRC's Internal Commission Procedures govern how business is conducted at the Commission level, including the Chairman's and Commissioners' responsibilities, Commission decision-making processes, and how sensitive information is provided to Congress. The procedures, which are available on the NRC's website, address the Commission's actions as a collegial body. I believe the Commission is functioning well in this regard.

The Commission reviews its internal procedures every two years and makes changes as appropriate. We are currently in the midst of this biennial review and recently issued a revised Chapter 6, pertaining to how the agency addresses requests from Congress for certain sensitive documents. Before I discuss the changes, I would like to make it clear that the NRC is committed to keeping Congress fully and currently informed of its activities and providing individual members with needed information.

The recent revision to the Internal Commission Procedures expresses the expectation that requests for certain sensitive, non-public documents be submitted by the Chairs or Ranking Members of our oversight committees. Though this expectation would require some members of Congress to take an extra step in obtaining sensitive documents from the Commission by working through the Chair or Ranking member of an NRC oversight committee, this step was necessary to ensure that sensitive documents have the appropriate protection under the law. Making this change allows full and free communication between the Commission and all members of Congress, and at the same time affords greater protection against unintended waiver of the agency's privileges to withhold sensitive, non-public information in response to subsequent Freedom of Information Act (FOIA) requests for the same information. We have, in recent years, received FOIA requests for documents that we have provided to our oversight committees or to individual members. In considering this change, the Commission carefully assessed how to best protect sensitive documents. We consulted extensively with the Department of Justice (DOJ) to ensure that our procedures are consistent with DOJ FOIA guidance and carefully considered the practices of other federal agencies.

We also clarified language describing our intention to continue to request special handling of some sensitive documents, when the request is from the Chair or Ranking member, because we felt the previous written procedures did not accurately reflect longstanding Commission practice in this regard. Historically, in response to Congressional requests for documents, the Commission identifies for the requester those categories of documents that, if

released, would raise concerns for the Commission in carrying out its role as an independent regulator. These would include requests for sensitive documents pertaining to ongoing agency adjudications or potential or ongoing investigations or enforcement actions. Almost uniformly, Congressional offices have respected the Commission's request for special treatment of these select categories of information. We believe that these conversations are important and worthwhile. The Commission will continue to ensure that at the same time, transmission of all other requested documents that fall outside these especially sensitive categories is prompt and does not await the outcome of these conversations.

It is important to underscore that we do not receive a large number of requests for sensitive documents from individual members of Congress. As always, in cases where individual members request non-sensitive information, the Commission will continue to provide prompt, comprehensive briefings, updates, and publicly-available documents. In addition, we recognize that there may be instances where an individual member with a facility in her or his state or district comes directly to the Commission with a request for sensitive documents about that facility. Our objective will be to find mutually acceptable means to provide the member with a response whether that be by access to documents, information, or any other appropriate assistance. Further, let me emphasize that, as always, if an event or accident occurs that may impact an individual member's state or district, the Commission will work diligently to meet the individual member's immediate and long-term information needs. These practices have not changed.

We are confident that, with these revised procedures, we will continue to meet the needs of Congress.

A LOOK AHEAD

While we have accomplished a great deal, many challenges lie ahead for the NRC. In the next several months, the Commission's primary activities will include the following issues:

- Accomplishing the NRC's core mission in a challenging budget environment;
- Completing the Yucca Mountain Safety Evaluation Report in an efficient and effective manner;
- Completing the Generic Environmental Impact Statement and final rule on Waste Confidence;
- Further implementing safety-significant lessons learned from the Fukushima accident in accordance with established agency processes and procedures;
- Overseeing decommissioning activities at SONGS, Keweenaw and Crystal River 3;
- Continuing to conduct oversight of construction activities at the new Plant Vogtle, V.C. Summer, and Watts Bar 2 reactors;
- Reviewing the first SMR design certification applications;
- Continuing implementation of radioactive source security enhancements, including ensuring that Agreement States have implemented compatible regulations and updating our own procedures and guidance documents;
- Moving forward with cyber security efforts for nuclear power plants, fuel cycle facilities, research and test reactors, and materials licensees; and
- Strengthening our close cooperation with international partners.

Chairman Upton, Ranking Member Waxman, Chairman Whitfield, Ranking Member Rush, Chairman Shimkus, Ranking Member Tonko, I thank you for the opportunity to appear before you today and would be pleased to answer your questions.

Mr. SHIMKUS. Thank you, Chairman. Now, we would like to pause for a second to allow our Ranking Member Waxman to give his opening statement. Mr. Waxman, you are recognized.

OPENING STATEMENT OF HON. HENRY A. WAXMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. WAXMAN. Thank you very much, Mr. Chairman. I apologize for being late. The other subcommittee that is meeting at the same time started late. So I am here, and I wanted to thank you and especially, Chairman Macfarlane and her fellow Commissioners for being here today.

I want to use my opening remarks to comment on a really bad idea. That is the bill that we will be examining today. The bill includes a laundry list of changes to the Nuclear Regulatory Commission's internal procedures that dredge up old disputes that the Commission has already worked through. After the Three Mile Island melt down in 1979, Congress and the Carter administration recognized the importance of centralized emergency authority in the event of a domestic nuclear crisis. The Reorganization Plan of 1980 addressed this concern and established the basic responsibilities of the Chairman and the Commissioners of the Nuclear Regulatory Commission.

The Terry bill purports to codify the Reorganization Plan. But it actually rescinds the plan and ignores a key lesson learned from the Three Mile Island: that the United States needs a single, clear decision maker during a nuclear emergency. The bill takes exactly the opposite approach by undermining the Chairman's authority in a crisis. It requires the NRC Chairman to involve other Commissioners in emergency decisions. The bill even prevents the Chairman from taking any emergency actions until she notifies the four Commissioners, two Congressional committees, and the general public that she has declared an emergency.

I think that is a troublesome idea. If a nuclear meltdown is happening at a U.S. reactor, we don't need a bureaucracy. We need the Chair to act quickly and decisively. We should not require her to call a host of Commissioners and members of Congress, along with the NRC's Web site administrator or public affairs office, before exercising emergency authority. The impact of this bill could be truly disastrous in a nuclear crisis.

And that is not the only troubling change in the bill. Not long ago, the Commission was struggling with a nasty, personal conflict. While the Commission seems to have moved past that discord under the leadership of Chairman Macfarlane, Mr. Terry, the committee Republicans, can't seem to let it go. The Terry bill would stir the pot by reopening past disputes. We need the NRC focused on nuclear safety, not constantly rewriting its internal procedures.

The effect of virtually every proposed change in the bill is to shift authority from the NRC Chair to the other Commissioners. It even would mandate that the Commissioners complain to the President and Congress about any perceived violations of the bill's requirements by the Chair. That is not likely to encourage continued collegiality.

There is one NRC internal procedure that is not addressed by the Terry bill but that should be changed. The Commission recently revised its policy for how it handles a Congressional request for non-public documents. Previously, NRC provided documents requested by the Agency's oversight committees, as well as individual members on those committees or with nuclear facilities in their districts. Under the new policy, NRC will not provide nonpublic documents to individual members, and may withhold sensitive documents from chairmen and ranking members as well. I think this is a misguided and dangerous policy. If Mrs. Capps wants to see a document related to Diablo Canyon, she should get it. If Mr. Terry wants information about Fort Calhoun, he should get it. This is not a partisan issue. It is about the institutional oversight responsibilities of this committee and its members. And I encourage all five Commissioners to rethink this flawed policy. And I look forward to further discussing this issue today.

Mr. Chairman, thank you for your courtesy. And I have to apologize in advance, because I have to be at another subcommittee at the same time as this subcommittee. And cloning has not advanced sufficiently for me to be at both places at once. But I will be back and forth as much as possible. Thank you.

Mr. SHIMKUS. The gentleman yields back his time. I am sure a lot of people are glad that you are not able to be cloned yet, Mr. Waxman. So—we will miss you, though.

Mr. WAXMAN. So am I.

Mr. SHIMKUS. And I am sure Mr. Terry appreciates your ability to comment on his bill. So with that, we turn back to the Commissioners. Again, welcome. Commissioner Svinicki, you are recognized for 5 minutes.

STATEMENT OF KRISTINE L. SVINICKI

Ms. SVINICKI. Thank you. Thank you, Chairman Shimkus, Chairman Whitfield, Ranking Member Waxman, Ranking Member Tonko and members of the subcommittees for the opportunity to appear before you today at this oversight hearing on NRC management and the potential need for legislative reform.

The Commission's Chairman, Dr. Allison Macfarlane, in her statement on behalf of the Commission, has provided a comprehensive description of key Agency accomplishments and challenges in carrying out NRC's important mission of protecting public health and safety, and promoting the common defense and security of our Nation. The circumstances in which we find ourselves carrying out this mission require constant adaptation of our approaches.

This point was communicated very directly last month in a message sent from NRC's senior career official, the Executive Director for Operations, Mark Satorius, to all NRC Agency employees. His message was as follows. "Our future is likely to be dynamic and unpredictable. And the Agency will need to remain highly flexible and agile as we respond to new events and external pressures. We will need to continually evaluate the work we are doing, give careful consideration as to how best to use resources, and remain focused on safety and security." I agree with Mr. Satorius's statement.

As an organization which embraces the precepts of continuous learning, the NRC consistently seeks to improve its internal organizational effectiveness. As a member of this Commission, I will work with my Commission colleagues and the NRC staff to support the Agency's assessment of how we can accomplish our work efficiently and effectively with the circumstances and factors we face today.

I am confident that the NRC's dedicated and highly professional staff members are up to the task of meeting these challenges, as they have proven time and again over the course of the Agency's history. I thank them for their sustained commitment to the Agency, to its work and to each other.

Thank you. I appreciate the opportunity to appear today and look forward to questions.

Mr. SHIMKUS. Thank you. The Chair now recognizes Commissioner Apostolakis. And you are recognized for 5 minutes.

STATEMENT OF GEORGE APOSTOLAKIS

Mr. APOSTOLAKIS. Thank you, Mr. Chairman. Good morning, Chairman Shimkus, Ranking Member Tonko, Chairman Whitfield, Ranking Member Rush and distinguished members of the subcommittees.

Today, I would like to offer a few comments on the issue of cumulative effects of regulation. The Agency is addressing concerns about cumulative effects of regulation in several ways. For example, the NRC staff has implemented enhancements to our rule making process. These enhancements include the concurrent publication of guidance with proposed and final rules, as well as a specific solicitation of public comment on cumulative effects when the Agency publishes proposed rules.

Aside from the rule making enhancements, the NRC staff has also been receptive to industry proposals for adjustments to implementation schedules for post-Fukushima actions when justified.

In addition, in February of this year, the Commission directed the NRC staff to develop options for allowing licensees to prioritize the implementation of regulatory actions as an integrated set and in a way that reflects their risk significance on a plant specific basis. The NRC staff and industry representatives are currently exploring, in public meetings, the idea of piloting this proposal. The rationale behind this initiative is, first, that nuclear power plant risk is very site specific and, second, that focusing on just one area of regulation, such as post-Fukushima safety enhancements, ignores other important safety significant work that the Agency is doing, such as fire protection.

In closing, the NRC remains keenly focused on its core safety and security mission, and is utilizing our resources in a way that will have the greatest impact on improving safety. Thank you very much.

Mr. SHIMKUS. Thank you. The Chair now recognizes Commissioner Magwood for 5 minutes.

STATEMENT OF WILLIAM D. MAGWOOD IV

Mr. MAGWOOD. Thank you, Chairman. Good morning, Chairman Shimkus, Chairman Whitfield, Ranking Member Tonko. It is a pleasure to appear before you today. We appreciate your oversight,

even when the questions are hard, because we think it is very important that we have a chance to share our thoughts about these important issues.

Chairman Macfarlane's written and oral comments capture the full range of the activities that we have underway, so I won't dwell on that. But as you can see, it has been a very, very busy time for the NRC.

We have made considerable progress in a wide range of areas in recent years, including dealing with low-level waste issues, updating radiation protection standards, licensing the first new nuclear power plant since the 1970s. However, to this day, most public Congressional attention has been placed in response to the disaster at Fukushima Daiichi.

Since March 2011, the NRC has learned very important lessons from this tragedy. And it has taken clear and appropriate action to enhance U.S. nuclear safety. We have kept our pledge to neither overreact nor under-react to the events in Japan. And I think we have gotten it just about right.

At the same time, U.S. nuclear energy has also absorbed the lessons of Fukushima and has responded with strategies that, once fully implemented, could provide safety benefits that are actually beyond our regulatory requirements.

Perhaps more importantly, the mindset of our licensees have changed in the face of Fukushima. Two months ago, all of the Chief Nuclear Officers of the U.S. nuclear utilities traveled to Japan as a group to inspect the Fukushima site and talk with those who managed the disaster. The personal insights they gained on this trip may have benefits far beyond anything that we can regulate.

Our challenge now, both NRC and its licensees, is to absorb the post-Fukushima activities into our normal work and prioritize it appropriately. Doing so will require us to understand how to manage the preparation for low probability extreme events in concert with the enduring need to protect against much more likely accident scenarios. Commissioner Apostolakis' comments this morning point to an initiative that we have undertaken that will help in that direction.

But this is a big challenge. And the steps that we have taken in its face will have significant and far reaching implications for many years to come. As we strive to meet these challenges, the NRC will have, as always, the benefit of the very talented NRC staff, and to have the experienced people who lead them. Since we last appeared before this committee, the Commissioners appointed a new Executive Director of Operations, Mark Satorius, and a new General Counsel, Margie Doan. Both have already had a very strong positive impact on the Agency, and I look forward to continuing to work with them.

Thank you for your attention. I look forward to your questions this morning.

Mr. SHIMKUS. Thank you, Commissioner. Commissioner Ostendorff, you are recognized for 5 minutes.

STATEMENT OF WILLIAM C. OSTENDORFF

Mr. OSTENDORFF. Thank you, Chairman Shimkus, Chairman Whitfield, Ranking Member Tonko, members of the committee, for the chance to be before you today.

The NRC continues to effectively fulfill its safety oversight role by ensuring the proper safe operation of our nearly 100 operating reactors and the five reactors under construction across the country. As a learning organization, the NRC is always seeking to leverage operating experience. And as a result, we continue to evaluate the lessons learned from Fukushima, and as noted by the Chairman, initiate safety improvements where appropriate. I am very confident in the decisions the NRC has made to date in this area, and I believe the Commission is functioning properly as a body as intended by Congress and the administration.

Others have already talked about the waste confidence remand. I won't address that. I will talk very briefly about the Yucca Mountain licensing process. I think the November 18 order issued by the Commission reflected very careful thought and deliberation amongst these five Commissioners at this table. I think there is a very solid order that was put out here less than a month ago. I expect that we will have sufficient funds to complete the Safety Evaluation Reports, which I believe are important. And we will continue to keep this committee informed of those activities as we go forward on monthly reports.

I would also note that many nuclear power plants in this country today are operating under challenging and different economic conditions than in the past. Potentially costly repairs and the low price of natural gas have led to the permanent shutdown of four nuclear power plants this year. And Vermont Yankee announced they will shutdown next year because they are no longer economically viable. Interest in new reactors, as a matter of fact, is also waning in the current economic climate.

That said, the NRC will remain vigilant to ensure that plants continue to be operating safely, and will provide appropriate oversight for decommissioning activities. As others at this table have noted, we are also looking at the changing demands in our workload, and we have responsibility to ensure that our staff is appropriately right sized.

I appreciate this hearing, the committee's oversight role, and I look forward to your questions.

Mr. SHIMKUS. Thank you, Commissioner. And now I would like to recognize myself for 5 minutes for an opening set of questions. Because—Commissioner Apostolakis, because of your recusal, I am not going to ask you to respond to this series of questions, because they are basically all in direction to Yucca Mountain. So we will go with Chairman Macfarlane, and then from my left to right on the answering of the questions.

Pursuant to your duties as Commissioner, will you make every effort to fully and faithfully comply with the law, yes or no, Chairman?

Ms. MACFARLANE. Of course, I will make every effort to comply with the law.

Mr. SHIMKUS. Thank you.

Ms. SVINICKI. Yes.

Mr. MAGWOOD. Absolutely.

Mr. OSTENDORFF. Yes.

Mr. SHIMKUS. The DC Circuit reaffirmed in its August 13 decision that the Nuclear Waste Policy Act, and I quote, "provides that the Nuclear Regulatory Commission"—and on their quotation marks—"shall consider" the Department of Energy's license application to store nuclear waste at Yucca Mountain." And again, sub-quotes, "shall issue a final decision approving or disapproving," closed sub-quotes, "the application." Is that correct?

Ms. MACFARLANE. We are now in the process of—

Mr. SHIMKUS. No, just a statement that this is the DC Court affirmed. And this is what they have affirmed that you will do.

Ms. MACFARLANE. The DC Court affirmed that we would continue with the licensing process using the existing nuclear waste funds that we have.

Mr. SHIMKUS. Correct. So you agree with the statement from the Court?

Ms. MACFARLANE. I—

Mr. SHIMKUS. And that is—OK. Commissioner?

Ms. SVINICKI. Yes, I agree that the Court affirmed that.

Mr. MAGWOOD. I agree.

Mr. OSTENDORFF. I agree.

Mr. SHIMKUS. In its November 18 Order addressing the DC Circuit Court's Writ of Mandamus, you all acknowledge that the NRC does not have sufficient funds to complete the license review and the issue of final decision, is that correct?

Ms. MACFARLANE. We do not have sufficient funds to complete the licensing review, that is correct.

Ms. SVINICKI. The funds NRC has would be insufficient for making that decision.

Mr. SHIMKUS. Great. Thank you.

Mr. MAGWOOD. That is correct.

Mr. OSTENDORFF. That is correct.

Mr. SHIMKUS. When an Agency is legally bound to implement a statutorily mandated action but finds it lacks sufficient resources, do you believe it is incumbent upon that Agency to request the funding necessary to comply?

Ms. MACFARLANE. Budget decisions are decisions of the Commission, and we will discuss them as a Commission.

Mr. SHIMKUS. So is that a yes or a no?

Ms. MACFARLANE. That is budget decision, and a decision of the Commission, and we will—

Mr. SHIMKUS. OK. Well, let me just ask it again, just so we understand the question. When an Agency is legally bound, as you all have agreed, to implement a statutorily mandated action, but finds that it lacks the sufficient resources, do you believe it is incumbent upon the Agency that is legally mandated by law that you would request the funding necessary to comply?

Ms. MACFARLANE. I believe we are complying with the law. We are complying with the Court's decision now. And going forward, we will discuss any future budget decisions as a commission.

Mr. SHIMKUS. All right. This is where I always get frustrated. So your response is that even though you are legally mandated to comply with the law, and you don't have sufficient funds, you don't

think it is incumbent upon you to request the needed funds to comply with the law?

Ms. MACFARLANE. I think we can—we will discuss this as a commission and go forward with it—

Mr. SHIMKUS. Why don't you just answer—it is the law. We are required to comply. And we need to add a request to fund that ability.

Ms. MACFARLANE. We will certainly comply with the law. And I will comply with the law.

Mr. SHIMKUS. OK. Commissioner Svinicki?

Ms. SVINICKI. Yes, I believe that an Agency should formulate and request budgets that comply with the law.

Mr. SHIMKUS. Thanks—Commissioner Magwood?

Mr. MAGWOOD. I think that we will formulate a budget that complies with the law. And we will consult with legal advice within the Agency and outside the Agency—

Mr. SHIMKUS. Yes, it is really not a quick—I am not trying—it is not really a quick—trying to be tricky. It is just saying—and the budget may not get approved. It may not get presented forward. But the basic question is, if the law says you have got to comply, and you say we don't have the money to comply, I don't think it is a tough response to say and I will ask for the money I need to comply with the law. Commissioner Ostendorff?

Mr. OSTENDORFF. I understand your frustration of the responses here, and this is a very challenging issue. As an individual Commissioner, I will have an opinion. As a member of the Commission, I will also work with my Commission colleagues here to my right. I think your question is directly with respect to the fiscal year 2015, fiscal year 2016 budget process. Would we be requesting additional funds for the high level waste licensing? And I think that we have an obligation to follow the law. But I also note that this will be a Commission decision as to how we move forward with the budget request.

Mr. SHIMKUS. But the question is to you as an individual Commissioner.

Mr. OSTENDORFF. Yes.

Mr. SHIMKUS. Thank you. And my time is almost expired. Let me finish with this. As a statement, the NRC has not, as you noted, submitted a supplemental budget request to the Office of Management and Budget for additional nuclear waste funds based upon the November 21 letter that you sent to us. So my time is expired. I now yield to the Ranking Member, Mr. Tonko, for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair. And again, welcome.

After the Three Mile Island accident, President Carter convened a commission to identify lessons learned in order to improve nuclear safety and ensure a more timely and effective response to nuclear emergencies. The panel concluded that the Nuclear Regulatory Commission needed a clear leader who accessed the Agency's Chief Executive Officer. The panel also concluded that in a nuclear emergency, the country needs a single unified voice to take charge and make decisions.

I am concerned that H.R. 3132 takes us backward and ignores these important lessons. The bill is at least a provision of the Reorganization Plan that consolidates emergency authority with the

Chair. Under the bill, the Chair may not exercise emergency authority unless, and until, the Chair satisfies two criteria. First, she must formally declare that a specific emergency exists. Second, before taking any action, she must notify the other 4 Commissioners, the relevant Congressional committees, and the general public.

I can understand the benefit of a formal declaration. But if the Chair gets a call at 3 a.m. that a nuclear power plant is in meltdown, why would we require her first action to be calling her congressional affairs and public affairs staff, rather than calling for an evacuation? Chairman Macfarlane, do you think a requirement for you to notify this committee and the Senate before taking any emergency action in response to a nuclear crisis is appropriate?

Ms. MACFARLANE. I think that the existing internal commission procedures on this issue are adequate. I believe that the Commission is operating collegially. And I think that no changes are needed at this time.

Mr. TONKO. Thank you. Should an action to respond directly to the crisis be the first item on your agenda?

Ms. MACFARLANE. No, I don't believe so.

Mr. TONKO. Let me ask the other Commissioners. Do any of you think that the Chair should have to put out a press release, or update the NRC Web site, to fulfill a public notice requirement before exercising emergency authority in an urgent situation when time is of the essence? Commissioner Svinicki?

Ms. SVINICKI. Under our procedures, the Chairman heads an executive team that immediately begins to respond to the emergency. And I would just note that the NRC does not make the decision on evacuations. That is done by the Governor of the State in which the accident is occurring.

Mr. TONKO. And, Commissioner Apostolakis?

Mr. APOSTOLAKIS. No. As you have pointed out, there was a very clear message from Three Mile Island: The Chair should be the decision maker during an accident. The last time with Fukushima, there were some issues that were raised regarding when the Commissioners were notified. The Chairman had assumed emergency powers. And, certainly, I don't think that the Chairman should have to worry about notifying the other Commissioners when she is notified that there is an accident and action needs to be taken. At some point later, probably she would have to do that.

Mr. TONKO. Thank you. Commissioner Magwood?

Mr. MAGWOOD. I think Commissioner Apostolakis' explanation is correct. I think it makes a great deal of sense to enable the Chairman to take immediate action in the face of an emergency. But I do also think that it is important that the Chairman, in appropriate time during the crisis, notify the Chairman's colleagues that emergency powers have been declared, and the situation such as that exists to provide clarity. Because, quite frankly, when this was used previously, there was a long period of time where there was no clarity as to whether an emergency was actually declared or not. And that created a great deal of confusion within the Agency.

Mr. TONKO. Thank you. Commissioner Ostendorff?

Mr. OSTENDORFF. I agree with Commissioner Magwood's characterization.

Mr. TONKO. Thank you. Let me ask the other Commissioners. Do any of you think that the Chair should have to put out a press release or update the NRC Web site to fulfill a public notice requirement before exercising emergency authority in an urgent situation when time indeed is of the essence? Commissioner Svinicki?

Ms. SVINICKI. I don't believe a press release should be the highest priority item.

Mr. APOSTOLAKIS. No, she should not have to do that.

Mr. TONKO. Commissioner?

Mr. MAGWOOD. No, that should not be the first action.

Mr. TONKO. And, Commissioner Ostendorff?

Mr. OSTENDORFF. Not the first action.

Mr. TONKO. H.R. 3132 also establishes a greater role for the Commissioners in an emergency. For example, the bill requires the Chair to consult with the full commission before taking any regulatory or policy actions during an emergency, as appropriate. And it elevates the involvement of all the Commissioners in making decisions that "may affect commission actions and policies beyond the response to a particular emergency." That could be interpreted differently by different Commissioners and clouds the authority of the Chair. So, Chairman Macfarlane, during a nuclear emergency, would your time be better spent actually responding to the emergency, or engaging in discussions with your colleagues about whether a particular response might affect policy in the future?

Ms. MACFARLANE. Having personally practiced emergency drills with my NRC colleagues and staff, it is clear that time is of the essence and situations change rapidly. It is important to be able to be as responsive as quickly as possible. I would certainly, and have pledged before, to keep my colleagues informed to my best ability of all actions and the situation.

Mr. TONKO. Thank you. I note my time has expired. So with that, I will yield back.

Mr. SHIMKUS. The gentleman yields back his time. The Chair now recognizes the gentleman from Kentucky, Mr. Whitfield, the chairman of the Energy and Air Quality Subcommittee.

Mr. WHITFIELD. Thank you, Chairman Shimkus. And thank you all for your opening statements and for, as I said earlier, being with us today.

I am going to ask a question relating to a comment that I made in my opening statement, and that is about the—over the past 10 years, the number of licensing actions and tasks have decreased by 40 percent, and yet the nuclear safety budget has increased by 48 percent. So you just look at those numbers, and I think a person could be quite critical of the Agency and say, oh, your responsibility's going down, your budget is going up and the country has a debt now approaching \$18 trillion. So I would just ask each of you individually, if you wouldn't mind, just commenting briefly on—is criticism like this valid, or is there a valid reason for budgets to go up that much and the workload is going down? Chairman Macfarlane?

Ms. MACFARLANE. Thank you. I would like to submit this for the record.

Mr. WHITFIELD. OK.

Ms. MACFARLANE. This is a chart of the budget, the NRC in actual dollars and in constant dollars from 2003 to this fiscal year 2013.

Mr. WHITFIELD. OK.

Mr. MACFARLANE. And I think you can see that—basically, if you look at the constant dollars, which is the correct comparison over time—

Mr. WHITFIELD. Right.

Ms. MACFARLANE [continuing]. That the budget now in 2013 is the lowest it has been since 2007. And in 2007, that was before we had Yucca Mountain, we had waste confidence and we had Fukushima. So I would argue we are doing now much more with less.

Mr. WHITFIELD. And what is the total budget for this year?

Ms. MACFARLANE. In constant dollars, the total budget is—this is \$671 million versus in 2007, it was \$680 million.

Mr. WHITFIELD. So your—your position is then—in constant dollars, you are roughly the same or less—

Ms. MACFARLANE. Less, yes.

Mr. WHITFIELD. And the workload—

Ms. MACFARLANE. Is higher.

Mr. WHITFIELD. The workload is higher?

Mr. MACFARLANE. Yes.

Mr. WHITFIELD. So even though applications and licensing actions are going down, the workload is higher—

Ms. MACFARLANE. Yes.

Mr. WHITFIELD. And why is that?

Ms. MACFARLANE. The workload is higher because since 2007, at least, we have had the Yucca Mountain application. We have had waste confidence decision. And, of course, we have had the Fukushima accident, which has added to our workload quite significantly.

Mr. WHITFIELD. Yes. Yes. And all of you agree with that assessment, I am assuming? Do you, Ms. Svinicki?

Ms. SVINICKI. I would just note that there isn't a direct correspondence between the budget amount and the number of industry generated items for review in front of us. We do have a number of constant activities that simply must be budgeted every year.

Responding more generally to the criticism, you asked for a reaction to the criticism, I would say that as noted by members of the committee in their opening statements, this is clearly not the world in 2013 that NRC had the trajectory that we had been planning for. And so I do agree with Commissioner Ostendorff's statement, it is appropriate for this Commission and for the Agency to be looking at the right sizing and the application of resources to activities.

Mr. WHITFIELD. All right.

Ms. SVINICKI. I think we attempt to do that on a pretty constant basis.

Mr. WHITFIELD. OK. Thanks. And I am running out of time. I do want to ask another question. In your opening statement, Ms. Macfarlane, you referred to a modular reactor process, to start considering those.

Ms. MACFARLANE. Um-hum.

Mr. WHITFIELD. I would like to ask each of you to comment just briefly on your view of the potential of modular reactors, and whether or not they can play an important role or not? Let us start with you, Chairman—

Ms. MACFARLANE. Sure. I think they are an interesting—very interesting innovation. And, you know, we will see—we are waiting for their applications. And I am very interested in seeing how this technology progresses.

Mr. WHITFIELD. OK. Ms. Svinicki?

Ms. SVINICKI. Well, our colleagues at the U.S. Department of Energy have the tough job of looking at the merits of the various innovations of the developers of this technology, because DOE has programs to fund some of the technology development. But we do expect, as a safety authority, to be receiving some designs for review. And we have worked hard to prepare the Agency to be ready to do those reviews.

Mr. WHITFIELD. OK. Mr. Apostolakis?

Mr. APOSTOLAKIS. Well, the industry is spending serious dollars in developing the designs of these reactors. So there must be potential there.

Mr. WHITFIELD. OK. Mr. Magwood?

Mr. MAGWOOD. I honestly don't know. I think I am—like many people, I am waiting to see. Because in the past, for small reactors, the challenge has never really been just technical. It has always been economic and financial. And until these products are on the market, they will be very difficult to know for sure. So I am waiting and seeing.

Mr. WHITFIELD. Thank you.

Mr. OSTENDORFF. I will just comment, Chairman Whitfield, that I think we are ready as an Agency to receive the applications. We have probably done as—gone as far as we can, absent an actual license application in hand. We expect to get one the latter part of 2014.

Mr. WHITFIELD. Thank you very much. Thank you.

Mr. SHIMKUS. The gentleman yields back his time. The Chair now recognizes the gentleman from California, Mr. McNerney, for 5 minutes.

Mr. MCNERNEY. Thank you, Mr. Chairman. Ms. Macfarlane, I think you gave an answer to an earlier question that you may have intended another answer to give. Shouldn't an action in response directly to a crisis be the first item on your agenda? Shouldn't responding to a crisis be the first item—safety be the first item on your agenda?

Ms. MACFARLANE. Yes. For—in the case—in the event of an emergency?

Mr. MCNERNEY. Yes.

Ms. MACFARLANE. Yes, of course.

Mr. MCNERNEY. Thank you.

Ms. MACFARLANE. Sorry.

Mr. MCNERNEY. Regarding nuclear waste, Ms. Macfarlane, is local public acceptance necessary for implementation of a nuclear waste disposal site?

Ms. MACFARLANE. I think this is an area of discussion. The Blue Ribbon Commission on America's Nuclear Future looked at this

issue. They said that consensus was an important piece of siting, that siting decisions weren't just technical decisions, but they were also societal. I think if you look at the experience of other countries on this issue, ones that have been more successful recently, countries like Sweden and Finland and France, that—local consensus is important.

Mr. MCNERNEY. Good. Do you—does Yucca Mountain have local public acceptance?

Ms. MACFARLANE. It is not for the Nuclear Regulatory Commission to judge that, I am afraid.

Mr. MCNERNEY. OK. That is fair enough. In November, Ms. Macfarlane, the U.S. Court of Appeals for the District ruled that the Department of Energy can no longer collect the \$750 million in annual waste disposal fees from nuclear operators. How is this ruling going to affect the NRC's ability to develop nuclear waste storage sites?

Ms. MACFARLANE. At the moment, it is not going to affect us at all.

Mr. MCNERNEY. OK. I am not sure which Commissioner to ask this question of, but how long would it take to get a license reviewed for a new nuclear waste—nuclear power plant design?

Ms. MACFARLANE. For a new power plant design?

Mr. MCNERNEY. Right. Right. From scratch.

Ms. MACFARLANE. From—a design certification?

Mr. MCNERNEY. Right.

Ms. MACFARLANE. It takes some months to a few years. But it depends in large part on the quality of the application. And if there are problems with the application, then we have a number of iterations with the applicant.

Mr. MCNERNEY. So when I hear horror stories—

Ms. MACFARLANE. But maybe my colleagues would like to comment?

VOICE. Yes.

Mr. MCNERNEY. When I hear horror stories about how long it takes, 5 years or 10 years, that is likely to be due to some error—problems in the application?

Mr. APOSTOLAKIS. It does take that time, sometimes longer. But it is several years. Now, if there are new—really new designs like the small modular reactors, there will be several policy issues that will have to be resolved. So I really don't know how long that will take.

Mr. MAGWOOD. There is no such thing as the average case with these things. But on average, I would expect that a design certification is usually about a 3-year exercise. But to actually implement that, to build the plant, takes considerably longer. And it really depends on the situation. For example, if another applicant comes to build an AP1000 plant, which has already been certified and which, as you noted, was under construction, that would be a much shorter process than if someone came to us with a completely new design. So it depends on exactly what the application is.

Mr. MCNERNEY. Thank you. Mr. Magwood, I appreciate your comment about the Commission's challenge in balancing the potential for long—for low probability events versus the day-to-day

events that need constant attention. How does the Commission go about making those sort of decisions?

Mr. MAGWOOD. We are working on that right now.

Mr. MCNERNEY. Thank you. Mr. Apostolakis, one of the things you said was—and I think I am quoting it, the cumulative effects of regulation. That sounds like something out of Fox News. Could you clarify what you meant by that, please?

Mr. APOSTOLAKIS. We have—especially after the Fukushima accident and the regulations have started—well, started coming out of the Commission, there were a lot of complaints by the industry that we were issuing regulations without considering other regulations that they have to comply with. So each decision of the Commission is focused only on that particular regulation. And the industry wants the Commission to think about the cumulative effects. What is it that they have to do? Do they have the resources? Do they have the time? And is every single regulation or request by the NRC of equal importance? So that is where—that is the issue of cumulative effects of regulation, and the Commission has responded.

Mr. MCNERNEY. OK. Thank you.

Mr. SHIMKUS. I didn't know my colleague was a fan of Fox News. So the Chair now recognizes the gentleman from Texas, Mr. Barton, for 5 minutes.

Mr. BARTON. Thank you, Mr. Chairmans, in this joint hearing. I was pleasantly surprised to learn that the NRC can review a design application in a few months. You got three right now that have been under review for over 5 to 7 years. You might go back and try to whip those out before Christmas since it doesn't take but a month or 2. I am going to ask Mr. Shimkus' question a little bit different way. Since Yucca Mountain is back under review, and since all the Commission indicates that you don't have the resources to complete the review process, anybody want to estimate about how much additional funding you might need? Ms. Svinicki, what is your guess on that? And that is not a trick question. I am just interested.

Ms. SVINICKI. In order to assess and develop the order that we issued last month that restarted the licensing process, we did receive some input. I don't want to say they have the full fidelity of a budget estimate, but we attempted to have submitted to us, both by the adjudicatory board and also the staff, some estimates for these activities. But I would not characterize to you, sir, that we have a complete current estimate for getting all the way to a final licensing decision.

Mr. BARTON. OK.

Ms. SVINICKI. We do know that restarting the adjudication would be a resource intensive activity.

Mr. BARTON. I am not trying to be cute here. I want a general ballpark estimate. Are we talking about a few million, several hundred million, a billion? I mean, just some sort of order of magnitude?

Ms. SVINICKI. For NRC's activities alone, again this depends on how the Department of Energy is resourced to support our activities, because they are also a participant in this. It is very difficult for me to estimate the total dollars. Before activities were sus-

pended, our budget requests for NRC were varying. They were approximately—in some years, they were very close to \$100 million just for our review activities for a single year. That began to taper down a bit, I think closer to \$50 million a year. Based on where it had been in previous years when the review was underway, I think your estimate of the hundreds of millions is probably in the area. That is very difficult to estimate.

Mr. BARTON. That is good enough. Madam Chairwoman, has the Commission or the administration, if not the Commission, taken a position on Mr. Terry's reform bill?

Ms. MACFARLANE. Has the Commission as a whole—no, it has not.

Mr. BARTON. Do you have an opinion on his bill?

Ms. MACFARLANE. Yes. My opinion is that—my personal opinion is that it is not necessary at this time, and it may have unintended consequences.

Mr. BARTON. OK. Any other Commissioner wish to give your opinions on his bill? You don't have to, I am just interested.

Mr. OSTENDORFF. I will comment, Congressman Barton. I think in July of last year, I responded to a QFR following a hearing to Chairman Shimkus, and just my position was that with Chairwoman Macfarlane here, the challenges we had as a Commission with the previous Chairman have gone away, that we are operating in an open collegial environment. So some of the issues and motivations behind the challenges we had have disappeared. But there are a couple of areas where there will be greater clarity on some aspects of Congressman Terry's legislation. There are some aspects that I personally told Chairman Shimkus via my written response with clarification of the invocation of emergency powers, for instance, would benefit from greater clarity in the statute.

Mr. BARTON. OK. Good. My last question. The last time the Commission was here, I pointed out to the Chairman that you hadn't given a report on the Fukushima accident. And you finally did issue a report last week. So that is the good news. The not-so-good news is there is still lots of things that the report didn't address. I am just going to go through a very quick listing of what the staff has indicated to me was not addressed in the report. You didn't address the fact that the U.S. has an independent regulator, yourself, and Japan does not. The U.S. has an institute of nuclear power operators to establish best management practices, Japan does not. The U.S. requires plant specific training, Japan does not. The U.S. requires severe accident management guidelines, Japan does not. The U.S. requires complex training scenarios, site specific, and Japan does not. The U.S. requires water level procedures for boiling water reactors, Japan does not. The U.S. requires site specific evaluation criteria, Japan does not. And the U.S. has a requirement for a design basic flood planning that Japan does not. Now, all these things that the U.S. does, we can give your Commission kudos for requiring that. That is a good thing. The fact that none of this was considered in your evaluation of the accident, my question to the Chairwoman, do you consider the report that was issued last week to be the final word, or do you agree with me that more work needs to be done?

Mr. MACFARLANE. The report that was issued last week noted that it wasn't comprehensive. But it noted that there were similar design basis requirements between the U.S. and Japan prior to the accident, but that there were different approaches to beyond design basis events and severe accidents. At the same time, the report concluded that there was no evidence that a Fukushima-type accident would have been necessarily avoided in the U.S. And I go back to something Commissioner Ostendorff mentioned earlier, I think maybe in his opening statement, about the importance of operating experience. And in the nuclear industry, operating experience is essential. And from the accident, we learned that we had not taken into consideration a number of important issues. We had not, prior to that accident, considered that more than one reactor could melt down at the same time, for instance. There were a number of other issues that we did not consider. And I just want to point out that this is not something unique to the United States, to the NRC, that we discovered this. All other significant nuclear regulators around the world came to the same conclusions, and we are all implementing very similar changes as a result.

Mr. BARTON. My time has expired. I would ask all the other Commissioners to answer that question in writing for the record, Mr. Chairman.

Mr. SHIMKUS. Without objection, all members will be allowed to follow-up this hearing with written questions. The Chair now recognizes our colleague from the Virgin Islands, Ms. Christensen, for 5 minutes.

Ms. CHRISTENSEN. Thank you, Mr. Chairman. And, you know, thank you for holding this hearing. It is always important for the committee to exercise its oversight authority of this Commission as we did the FCC, but not to really interfere in the day-to-day decisionmaking of the Commission.

I want to focus on the Terry bill for a moment, and it overhauls the respective responsibilities of the Chairman and Commissioners of the Nuclear Regulatory Commission and essentially rewrites the Commission's internal procedures. Chairwoman Macfarlane, do you think it is necessary or productive to have Congress rewriting the details of NRC's internal Commission procedures?

Ms. MACFARLANE. I think, as I said before, that the current internal Commission procedures are quite adequate and that we need to be careful in any kind of changes that are made to the emergency powers piece, because we don't want any unintended consequences. We don't want to go back to a pre-Three Mile Island kind of situation and structure at the NRC.

Ms. CHRISTENSEN. Thank you. And I note that the Commission spent 3 years debating and more than 1 year voting on its last revisions in internal procedures. Many of the issues raised by the Terry bill were worked out by the Commissioners themselves—yourselves in 2011. So I don't really understand why we would want to reopen disputes that have really already been resolved by the Commission. The bill would set inflexible deadlines the Commission is to vote on atomic safety and licensing board reviews. The Commission's current decisions do not set rigid deadlines and allow for extensions for Commissioners who need additional time to reach a decision. So, Chairlady Macfarlane, do you think it is—it

makes sense to have strict voting deadlines without the possibility of extensions?

Ms. MACFARLANE. Well, the NRC is an adjudicatory body. The Atomic Safety and Licensing Board is an adjudicatory body. And some of the cases that they receive are quite complex, both technically and legally. And sometimes they take quite awhile to resolve. I know of no other court or adjudicatory body that has statutory time limits—that operates under statutory time limits.

Ms. CHRISTENSEN. Thank you. And right now, the NRC Chair develops a budget and presents it to the Commission for its review and approval. Under the bill, NRC staff would present the budget, not the Chairman. So again, Chairwoman Macfarlane, do you think it makes sense to strip the NRC Chairman of the responsibility to present an annual budget to the Commission?

Ms. MACFARLANE. I think it is important for a collegial body to function properly that someone has to have a leadership role, and somebody has to, in this case, present a budget. I think it is important for oversight committees to have somebody to hold accountable. So—

Ms. CHRISTENSEN. And I would imagine that budget is—the development of that budget takes place with staff, with the executive director, but it is—

Ms. MACFARLANE. It does. And I think you could ask my colleagues to confirm that the budget development that has occurred since I have been there has been done in a collegial and collaborative manner.

Ms. CHRISTENSEN. I want to try to finish up one more question. Back in October 2011, four NRC Commissioners sent a letter to the White House Chief of Staff to express concern about the then-Chairman Jaczko. It was a low point in the breakdown of the relationship among Commissioners. And Mr. Terry's bill actually requires Commissioners to send future letters to the President if they believe the Chairperson has not complied with NRC internal procedures. So again, Chairlady Macfarlane, do you think this mandate makes sense? Is it going to encourage continued collegiality among the Chairman and Commissioners?

Ms. MACFARLANE. You know, I don't want to comment on the—what happened before me. But I think I just will say and maintain that I think now the Commission is operating collegially and collaboratively, and I encourage you to check with my Commission colleagues on that issue.

Ms. CHRISTENSEN. Well—go ahead. I have about a minute for you to answer—for all four of you to answer that.

Ms. SVINICKI. I agree that the Commission is currently a very collegial body.

Mr. APOSTOLAKIS. I agree.

Mr. MAGWOOD. I agree as well. But let me just take a second just to say that after having gone through the last few years, I am extremely appreciative of what Congressman Terry has tried to do with this legislation. I think that it is appropriate for Congress to take a look at the legislative background of the Agency, given recent events. And I agree with Commissioner Ostendorff that there are some aspects of the reorganization plan that probably require some clarification. I think you, however, have pointed out some

things that could lead to unintended consequences, as Chairman Macfarlane said. So I think it is certainly something that is worth looking at. And I do think there is room for clarification.

Ms. CHRISTENSEN. Mr. Ostendorff?

Mr. OSTENDORFF. I agree with Commissioner Magwood's comments. And I would just add two pieces here. One, I think the Chairman needs to be able to be the Chairman and exercise a leadership role, and that he or she has to have appropriate authorities to do such. I also think that there are places where greater clarification would be helpful, and I believe that is the spirit of Congressman Terry's efforts in several cases here.

Ms. CHRISTENSEN. Thank you, Mr. Chairman. I just think that the Commissioners—the Commission itself has the authority and the wherewithal to make those clarifications. Thank you, Mr. Chairman. I yield back.

Mr. SHIMKUS. The gentlelady yields back her time. The Chair now recognizes the gentleman from Georgia, Mr. Gingrey, ranking member of my subcommittee, for 5 minutes.

Mr. GINGREY. Vice chair. Mr. Chairman, thank you. Thank you very much. I am very pleased to hear that the Commission is a collegial body, because indeed we are too, as you all know.

Chairwoman Macfarlane, I understand you spoke last week to a conference in Japan where you indicated, and I quote, "We have no ultimate plan for spent fuel disposition." I don't know if this statement reaches the depth of a selfie. But if there is no plan, what was the basis of the DC Circuit issuing a Writ of Mandamus compelling the Agency to resume its review of Yucca Mountain?

Ms. MACFARLANE. I think I was referring in general to the fact that, globally, there is right now no high-level waste repository in any country. So I was speaking very broadly when I was making these statements at this workshop.

Mr. GINGREY. Yes, I understand. But if there is no plan, what is the basis for our electricity rate payers to pay \$750 million to the Federal Government every year?

Ms. MACFARLANE. I think the Court actually has overturned that for the moment.

Mr. GINGREY. Well, I assume—I—well, I don't assume. Actually, I assure you, Madam Chairman—I assure you that there is a plan. There may be a few people in this town that want to pretend that there is no plan. But there is. And it is enshrined in a law called the Nuclear Waste Policy Act. And 335—and not just Republicans—335 House Members voted to fund that plan this summer. What I think we need to see from NRC is your plan for fully and faithfully complying with the law. And I would expect an Agency that is statutorily mandated to complete an action, in this case the license review, to have a plan for doing so. Failing to plan—Madam Chair, I know you would agree with this—failing to plan is planning to fail. Is the NRC preparing this integrated plan that will encompass all actions necessary in support of a final decision, including detail schedule and resource estimates?

Ms. MACFARLANE. We are in the process of carrying out the—the staff is in the process of carrying out the order that I referred to that we issued on November 18. I understand our staff is going to be providing the Commission with a plan to move forward to carry

out the Court's decision later this month. So we will look forward to receiving that.

Mr. GINGREY. Well, let me ask the same question of all the Commissioners, starting from your right. Would you support preparation of such a plan? And if you would not, why not?

Ms. SVINICKI. I do support the development of these types of estimates within the Agency to inform, as we noted in our order, our future budget deliberations.

Mr. APOSTOLAKIS. I don't—

Mr. GINGREY. And I understand you're recused. Certainly. Mr. Magwood?

Mr. MAGWOOD. To be perfectly honest, I think that we have been so focused on implementing the Court's direction that we haven't taken the next step to really think seriously about where do we go from here. And I think you have raised the valid question. Actually, another Commissioner and I were talking about this just yesterday in a very, very brief way. So I think it is something we will have to take back and give a lot of thought to.

Mr. GINGREY. Mr. Ostendorff?

Mr. OSTENDORFF. I personally do support preparing a plan to see what it takes to move forward.

Mr. GINGREY. The Commission has directed the staff to—and I quote here "complete the Safety Evaluation Report, SER, using the approach that was underway when work on the SER was suspended. That is the staff should work on the completion of all remaining volumes concurrently, but issue each SER volume upon completion." These are the—my final two questions. Will that follow the previous schedule that was in place when the review was terminated, Madam Chairwoman?

Ms. MACFARLANE. The previous schedule that when it was terminated—start—

Mr. GINGREY. When it was terminated. Will you follow the previous schedule?

Ms. MACFARLANE. It—as I said, the staff is developing their plan to move forward. They are going to be giving that to us later this month.

Mr. GINGREY. Well, back then, Madam Chairwoman, Volume 3 was the next one scheduled for release. Can you tell the committee when we can expect to see that volume, Volume 3?

Ms. MACFARLANE. We don't have that detail right now, and I don't want to say more. Because right now, this issue is subject to pending Motions before the Commission and may be the subject of legal action. So we can't go into great detail on this issue.

Mr. GINGREY. Mr. Chairman, I yield back. Thank you.

Mr. SHIMKUS. The gentleman yields back his time. The Chair now recognizes the gentleman from Texas, Mr. Green, for 5 minutes.

Mr. GREEN. Mr. Chairman, I would like to take a minute, because our colleague, Congressman Gingrey, I know lost his mom last week. It is the first time I have seen you, Phil. And I know all of us share your loss in your mom. And like I said, I haven't had a chance to talk to you about it. But I appreciate your friendship and what we do on the committee.

With that, you know, having been on both these subcommittees for a number of years, I appreciate the panel, both the Chair and the members, because over the last few years, that has not been the relationship between the Chair and the members in the collegial. Now, I know where Congressman Terry is trying to go with his bill, because it was going to solve—trying to solve a problem a lot of us perceived in hearings over the last few years. And I have some concern about the imperial Chairman issue. And maybe we can look at that. But I just appreciate the partnership and the working relationship that the Chair you have instituted and the agreement that we have. I know it is an unusual way. We have an Agency to do that with the power being in the Chair so much.

But, Ms. Macfarlane, over the last few years, we have seen—you know, we haven't expanded our nuclear power base, although we hope to do that. And, frankly, I guess I want to go to some questions though about what we have done as compared to Fukushima. And I will go to those directly. You discussed the NRC reactor oversight process in the 5 columns of an action matrix in your testimony. Column 1 consists of the best safety and security performance. Column 2 and 3 requires excessive increases in NRC oversight and enhanced inspection. Would you agree that increased oversight and enhanced inspection means that there may be safety or security issues that require the Commission's attention?

Ms. MACFARLANE. Certainly that require the staff's attention, yes. And the Commission overall, certainly.

Mr. GREEN. OK. You state that there are 78 reactors in Column 1 and 14 reactors in Column 2 and 7 in Column 3. Would you agree that the majority of our Nation's nuclear reactors are meeting the highest safety and security standards?

Ms. MACFARLANE. The majority of our nuclear reactors are operating safely, yes.

Mr. GREEN. Recently, in the Federal Register, the NRC acknowledged that there are currently 56 rulemakings underway at the Commission. Do you know how many of those relate to safety or security?

Ms. MACFARLANE. I am not sure exactly. Fifty-six rulemaking, they may—they usually do relate to safety and security—

Mr. GREEN. Well, that is—

Ms. MACFARLANE. They may not all be around nuclear reactors. They might be around nuclear materials, too.

Mr. GREEN. If the majority of our nuclear fleet is already meeting the highest standard, what new analysis or evolving circumstances lead to these rules?

Ms. MACFARLANE. Operational experience.

Mr. GREEN. OK. Ms. Macfarlane, as you know, in 1998, the U.S. government breached its contractual obligations with respect to disposing of nuclear waste. Thus far, every challenge has been brought before the court system has agreed that the government must fulfill our obligation. CBO estimate that taxpayer liability related to the breach of the contract has reached approximately \$12.3 billion. Additionally, the taxpayers have spent approximately \$15 billion, give or take, on the development of Yucca Mountain. And, finally, Yucca Mountain is designed to handle about 70,000 tons of waste. At our current levels, our Nation would exceed Yucca's ca-

pacity even before it opens. In an NRC Order CLI 1308, it was written that the Commission would take appropriations requests under advisement in the course of the Agency's budgeting process. With \$30 billion in taxpayer funding and liability and waste that exceeds capacity, why would the Commission not request funding for a licensing process for the—Yucca Mountain?

Ms. MACFARLANE. Well, we are—as I said earlier, we are moving forward with the Court's order. And any further budgeting decisions will be Commission decisions.

Mr. GREEN. The courts determined the Commission must move forward. The administration determined that Yucca Mountain's not the answer. If that—if the answer isn't Yucca Mountain, how do we meet these obligations by the Court?

Ms. MACFARLANE. That is, you know, a policy decision that I am going to let you all wrestle with.

Mr. GREEN. Well, I think the House, we can probably deal with it. But we do have some issues with the Senate.

Ms. MACFARLANE. Um-hum.

Mr. GREEN. In February 2013, the Commission testified that restart of the Yucca process and completing the safety evaluations, that is SER, the NRC would need approximately 6 to 8 months, and has estimated \$6.5 billion—million. In September of '13, Commission stated that to complete the SER, it required 12 months and estimated \$8.3 million.

Ms. MACFARLANE. Um-hum.

Mr. GREEN. In November, it was reported the NRC staff estimated cost of \$11.1 million. And the last time the subcommittee has addressed Yucca Mountain, we acknowledged that to complete the SER, Volumes 2 through 5, might require additional resource 6.5. Is 8.3 the correct number? And why has the estimate increased over \$2 million over the last 6 months?

Ms. MACFARLANE. As we said in the Order, the staff's estimate has changed as a result of the proceeding being suspended for a number of years. And saying any more on this topic is not appropriate, because of the Motion before the Commission.

Mr. GREEN. Well, and I know—if we provide guidance, Mr. Chairman, from the House side, hopefully the Senate would recognize there is a Court decision we have to respond to. And we obviously—I know other countries—and I have been to other countries to see their nuclear waste facilities, and it would be nice if we actually led in that effort, even though some of our other countries are a little further ahead of us. So thank you, Mr. Chairman, for your courtesy. Appreciate the extra time.

Mr. SHIMKUS. Gentleman's time has expired. The Chair now recognizes the very patient Mr. Terry from Nebraska for 5 minutes.

Mr. TERRY. Thank you, Mr. Chair.

Mr. SHIMKUS. I think he wants to weigh in on this a little bit.

Mr. TERRY. Maybe. First, I would like to say the issue I think with the NRC is the public has to have confidence in you. And there has been—I think we can universally agree that there was a breach in confidence because you couldn't trust the NRC at one point in time. And I really appreciate you creating a collegial atmosphere, or reestablishing—because if you aren't working together, I don't think you can truly be an effective body. So I appre-

ciate you restoring some level of camaraderie and not a culture of distrust. On the other hand, it has been 33 years since Congress has really looked into the rules and procedures. And, frankly, because of the breaches that occurred prior to your arrival, Chairman, I think it is legislative malpractice to not recognize that there has been—well, now we know, some holes in those procedures. And I think probably the heart of that is the misuse of emergencies. And the heart of this bill is really about emergencies.

So I want to ask a couple of questions here.

So do you believe that there should be a declaration of an emergency?

Ms. MACFARLANE. Well, first of all, Congressman, thank you for the—

Mr. TERRY. I will do a Dingell. That is pretty much a yes or no question.

Ms. MACFARLANE. OK. Well, first of all, I just want to compliment you on the work that you put into this bill, and the thinking that you put into this bill. Of course, one should declare an emergency.

Mr. TERRY. All right. Well, that is not in your rules and procedures. And so that is one of I think probably the most important part of this is just to say that the Chair does have to physically say there is an emergency, and not keep that from your fellow Commissioners. Now, the bill says—and I kind of enjoyed some of the questions by my colleagues, because they made it sound like you have to declare the emergency and then right away call the Commissioners. The bill actually says 24 hours. Is that not enough—is that too much time or too little time to notify the other four sitting at that desk that you have declared an emergency?

Ms. MACFARLANE. I think it really would depend on the particular situation. I don't know that we can imagine all the situations that can come forward.

Mr. TERRY. Can you imagine—OK. And let me go—because we actually then define in here what an emergency is, and that is just simply that it is a safety threat.

Ms. MACFARLANE. Or a security threat.

Mr. TERRY. Or a—

Ms. MACFARLANE. We also are responsible for the security at nuclear facilities.

Mr. TERRY. Well—

Ms. MACFARLANE. And I am a little concerned about the security language in the bill, which requires the NRC to wait for another Federal Agency to declare a security threat at a reactor before the NRC can act.

Mr. TERRY. Well, I think maybe—I think you are misreading.

Ms. MACFARLANE. The NRC is responsible for security at reactors.

Mr. TERRY. OK. Well—

Ms. MACFARLANE. We practice this with our licensees.

Mr. TERRY. All right. Well, then I disagree with that interpretation. But if you would like to work further on that, that is fine. You—are you against the emergency provision?

Ms. MACFARLANE. In this bill?

Mr. TERRY. Yes.

Ms. MACFARLANE. Yes, I am.

Mr. TERRY. And you said it will have unintended consequences. Can you tell me what the unintended consequences would be of—

Ms. MACFARLANE. Well—

Mr. TERRY. Will you let me finish, please?

Ms. MACFARLANE. Sure.

Mr. TERRY. Of having to notify the four people on your right and left, the two on your right and two on the left that you have declared an emergency?

Ms. MACFARLANE. I have said earlier and previously before this body, and I pledge again to let my colleagues know in the event of an emergency, and certainly let you all know—the oversight committee know.

Mr. TERRY. OK. Well, then if you have pledged it, why—

Ms. MACFARLANE. In the event—

Mr. TERRY. I think the next Commissioner should have the same responsibilities. But until we change the rules, I don't know if the next person that takes over your role will be as responsible as you. And that is why your prior chairman has shown that we have a big hole in the procedures. And the next one may be as rogue or as I think Mr. Green was kinder by saying imperial. But that is why we have to change the rules. And I don't think a 24-hour notice to your colleagues and to this committee if there is a safety threat is that extraordinary. I think it is pretty reasonable. And the other part of that is you do have the power to declare, under this, the emergency. It is only if it is more than 30 days where we want the Commissioners to actually be involved. Before then, for 30 days, all you have to do is within 24 hours say there is an emergency, and that is—you are satisfied. And it is hard for me to get through my mind, turning to your assistant and say, "Make sure we email our Commissioners." That took 5 seconds for me to say. But that is extraordinary for you? I am just having a hard time with that. Yield back.

Mr. SHIMKUS. The gentleman yields back his time. The Chair now recognizes the gentlelady from California, Ms. Capps, for 5 minutes.

Mrs. CAPPS. Thank you, Mr. Chairman. And I thank you all on the Commission for being here today. As you know, I represent Diablo Canyon Nuclear Power Plant, which is owned and operated by PG&E.

Diablo Canyon is a major contributor to our local economy. And, obviously, it plays an important role in our State's energy portfolio. But it also sits on two earthquake faults, the Hosgri and the Shoreline. So safety is obviously always a top priority. Now, every power plant must be built according to a safe shutdown earthquake SSE standard, as we know, which is the maximum ground shaking that key safety elements are designed to withstand so it can safely shutdown.

As a condition of Diablo Canyon's operating license, the NRC required its safety systems to be evaluated using industry standard—calculations and tests to ensure that it could meet the SSE levels. But the NRC did not require the same industry standard calculations and tests to be used to evaluate the safe shutdown standards for an earthquake along the Hosgri Fault. In other words, there is

a lot of new information since those standards were set, which was predicted to be stronger than the reactor was licensed to withstand. I believe that is sort of commonly understood now.

And since then, of course, we have discovered a Shoreline Fault in the same reason, which is even closer to the reactor and also not yet fully understood. It makes a lot of my constituents very nervous. To my knowledge, the NRC has still not required safety testing using the same industry standard methodology that originally required in its operating license. In other words, there is some inconsistency here. And now, Dr. Michael Peck, the NRC's former senior resident inspector at Diablo Canyon, even filed a noncompliant—nonconformance report with the NRC, saying that the reactor was not in compliance with its license.

Chairwoman Macfarlane, in light of Dr. Peck's expert opinion, what is the NRC doing to ensure that the reactor is in compliance with the seismic safety requirements of its operating license?

Ms. MACFARLANE. The Diablo Canyon Nuclear Power Plant is in compliance with—

Mrs. CAPPSS. Well, he has written this report that is dissenting. I would ask you to answer in light of that.

Ms. MACFARLANE. Right. And the NRC's view is that the Diablo Canyon plant is within compliance, that there are actually three design basis earthquakes. The design basis—the double design basis, as you mentioned, and also the Hosgri earthquake one. That was discovered in the 1980s. The plant was reevaluated to see if it could withstand that, and it can. When the Shoreline Fault—

Mrs. CAPPSS. I am sorry—

Ms. MACFARLANE. It was reevaluated—

Mrs. CAPPSS. To see if it could withstand the Hosgri—

Ms. MACFARLANE. The Hosgri. Yes. And it can. And the Shoreline Fault was evaluated by independent analysis, and that fault is bounded by the design basis earthquakes. An earthquake that that fault could produce is bounded by the design basis earthquake.

Mrs. CAPPSS. But—

Ms. MACFARLANE. So the plant is considered within compliance.

Ms. CAPPSS. Let—

Ms. MACFARLANE. But let me say that we are now—we have asked all nuclear power plants in the country to reevaluate their seismic hazard. And so Diablo Canyon is in the process of reevaluating their seismic hazard. And their seismic hazard reevaluation is due into the Commission in March of 2015.

Mrs. CAPPSS. Will this new evaluation of Diablo Canyon that they are doing themselves be required to prove that the reactor can withstand the stronger Hosgri and Shoreline earthquakes, using—are you using the same industry standard methodology required in the operating license for the safe shutdown earthquake?

Ms. MACFARLANE. We are using the most up to date methodologies to do the seismic hazard reevaluation.

Mrs. CAPPSS. Do you believe they fully incorporate the—you do believe that?

Ms. MACFARLANE. To the best of my knowledge. But I can certainly take this for the record and do a more—give you a more detailed answer.

Mrs. CAPPS. Well, it is a complicated issue. And I—this is just a 5-minute question. But I wanted to make sure that you could provide me with a copy of Dr. Michael Peck's differing professional opinion. Are you able to do that, please?

Ms. MACFARLANE. I will have—

Mrs. CAPPS. So that I could have a copy of it?

Ms. MACFARLANE. Yes, I will have to check on that. But I will take your larger question for the record here and give you a more detailed answer.

Mrs. CAPPS. OK. Your response is rather troubling, particularly in light of the recent changes in NRC's transparency policies. I am curious to know whether, you know, this new policy of the fact that only the ranking member or the chairman are allowed to ask for information, does—how that affects your decision.

Ms. MACFARLANE. You know, I want to be clear here. We haven't significantly changed our policy. We are going to be as responsive and as transparent as we ever were. And, certainly, when you have concerns about a reactor within your district, we are going to respond as completely as possible.

[The information appears at the conclusion of the hearing.]

Mrs. CAPPS. I appreciate this. And I know, Mr. Chairman, I just want to make one final comment, because I am looking forward to getting these documents soon. This is of particular interest to my constituents. I am pleased to hear that in response—that in light of the recent changes in the NRC's transparency policies that you are still willing to get a response to us. But I am very troubled by these new policies that really preclude transparencies from members of a committee with oversight to be able to ask directly for information, both as a member of the committee and as the one with a nuclear plant in my district. I find the policy itself to be unacceptable. And that is with no offense to my good friends, the chairman and ranking member. But I should be able to freely address your committee. And it sounds like you are—

Ms. MACFARLANE. And you still are. You still are.

Mrs. CAPPS. I appreciate that.

Ms. MACFARLANE. But I hear your concerns.

Mrs. CAPPS. All right. Thank you very much. Yield back.

Mr. SHIMKUS. The gentlelady's time has expired. The Chair now recognizes the gentleman from Texas, Mr. Olson, for 5 minutes.

Mr. OLSON. I thank the Chair and welcome the Commissioners. Seventy-seven point nine miles from my house is the South Texas Project. As you all know, there are two reactors there. Unit 1 celebrated its 25th anniversary this past August. The South Texas Project is in Hurricane Alley. And yet for 25 years now, they have provided safe, reliable power for Southeast Texas and our whole Gulf Coast.

I want to follow up with some of the questions from Chairman Whitfield. My district also is a home to Fleur, a large construction company that is looking at making some small modular reactors using that technology. As you all know, these are smaller, more affordable reactors that could someday make new nuclear power available to more places.

My first question is to you, Chairman Macfarlane. The certification of new reactor designs by the NRC is best described as delib-

erate. And that is good. But as this process goes, it is sometimes too deliberate. As Chairman Barton said, it takes on average 7 years. I know DOE has a role in this. But safety is critical. Can you tell me what has caused these delays in designs in cases of the past, and what can you, the NRC, do to keep those small reactor designs reasonable and timely?

Ms. MACFARLANE. Thanks for the question, Congressman. The design certification process is a two-way street. And as I mentioned before, we do need high quality applications. And so what has often delayed the design certification process is questions that we have about the application, because we didn't get a high quality product to begin with. Now, to try to avert that in the case of small modular reactors, we have been working with the potential applicants, telling them what they need to provide to us and making sure that they clearly understand that.

Mr. OLSON. OK.

Ms. MACFARLANE. Maybe my colleagues would like to comment as well?

Ms. OLSON. I will just ask my question. Ms. Svinicki, is that close, please? Anything to add, ma'am?

Ms. SVINICKI. I would note that some of the small modular reactor designs that we are aware of are more innovative than others. I think that where the design is less similar to something we have previously approved, it is likely that we are going to have a series of questions that we will want to ask to assure ourselves of safety.

Mr. OLSON. Commissioner Apostolakis, sir?

Mr. APOSTOLAKIS. During the reviews, especially when the design has new aspects to it, technical issues arise that require response from the applicant and then an evaluation by the NRC staff. This happened with Westinghouse AP1000, and with General Electric's ESBWR. And these technical issues unfortunately are of the nature that, you know, they are not resolved within a week or 2 weeks or a month. So that is a cause for delay. I don't know what issues could come up with the SMRs being reviewed. We will have to see. But I think, you know, 5 to 7 years is not an unreasonable time.

Mr. OLSON. Yes. I have to get—Commissioner Magwood and Commissioner Ostendorff, I have to get your answers for the record, because I have one more question I want to ask just for you. I want to call you Captain Ostendorff, because as a guy who spent his Navy career chasing submarines, it is great to welcome a submariner here. And as a fellow graduate of the University of Texas Law School, welcome, welcome, welcome. I know you will be looking forward to this weekend, the football game that is going to happen between your alma mater, the Naval Academy, and the Army at West Point. And with all due respect to the chairman here, we are looking for 12 straight victories. Go Navy. Before we go.

But, actually, I am a strong supporter of nuclear power. And coming from a State that needs more baseline power, we need more nuclear power plants. I mentioned South Texas. They have been trying the two reactors for about a decade, stops and starts, not because of all you have done. There has been some things happen back home in Texas. But I am excited because we built two new plants there in Georgia and South Carolina. I will ask you, Cap-

tain, what have you learned with these new plants, because this happened—it has been a long, long time since we have authorized new reactors. What have you learned, good and bad, going forward, so I can help South Texas?

Mr. OSTENDORFF. Well, one thing that I will comment on, I can go back to my Navy experience. Thirty-three years ago, I was on my second submarine being built in Newport News shipyard, where I had responsibilities for supervising the testing of the propulsion plant in the Newport News shipyard. And this was the 25th submarine of this class being built at this time. This was 1980, the U.S.S. Atlanta. And for the 25th submarine being built with the same design, every week there were still new issues that came up about constructability. Where does this pipe hanger go? Where do you put this mount? How do you do this particular welding technique in this orientation? And for a very mature program for submarine construction at the time, we were continuing to learn lessons routinely. And so we should not be surprised if Vogtle, Watts Bar, and Summer construction that as we go through that process that we learn new lessons, because there will be some issues that come up that have not been anticipated.

Mr. OLSON. I am about out of time. I want to say—close by saying go Navy, beat Army. I yield back.

Mr. SHIMKUS. The gentleman is out of order. The Chair recognizes the chairman emeritus, Mr. Dingell, for 5 minutes.

Mr. DINGELL. Mr. Chair, I thank you for your courtesy. I commend you for the hearing. I welcome you, Chairman Macfarlane and members of the Commission. I want to thank you for your recent response to the letter sent by myself and a number of my colleagues on both sides of the aisle, asking the Commission to complete work on the Safety Evaluation Report for Yucca Mountain. I am encouraged by the recent order to finish the SER and look forward to its completion.

Now, Madam Chairman, as I just mentioned, on November 18 the NRC ordered the staff to complete work on the Safety Evaluation Report for Yucca Mountain, and that such work would take approximately 12 months. This timeframe made a few assumptions, and I would like to ask you some questions about those assumptions. On page 11, footnote 38 of the Commission's Order, first, will the Commission of the SER be given a high priority, yes or no?

Ms. MACFARLANE. It will be given a high priority.

Mr. DINGELL. Now, Madam Chairman, approximately how long do you anticipate will it take to gather the necessary key technical reviewers?

Ms. MACFARLANE. As I was able to say earlier, we are expecting a plan from the staff on moving forward on this later this month. Saying any more on this issue is not appropriate, because we have some pending Motions before the Commission on our Order.

Mr. DINGELL. Could you submit some quick, dirty response to the committee on that particular point? Now, Madam Chairman, is your staff developing a plan on how to move towards completion of the SER, yes or no?

Ms. MACFARLANE. Yes, we are.

Mr. DINGELL. When will such plan be completed, can you give us a rough answer on that, please?

Ms. MACFARLANE. The plan to move forward will be completed later this month.

Mr. DINGELL. It is my understanding that Nye County, Nevada, has appealed the SER Order. Does the NRC have sufficient funds to complete both the SER and to respond to Nye County's appeal?

Ms. MACFARLANE. Well, certainly, all litigation matters on Yucca Mountain come from the nuclear waste funds. In terms of specific amounts of money, I—because of this Motion before us, I can't go into any more detail.

Mr. DINGELL. Well, I have my great doubt that you will be able to do so. And as soon as you can tell us that you don't or you do or you need additional money for this, it would be appreciated if you would communicate that to us, because we want you to have the resources you need to do the job you have to do. Now, Madam Chairman, approximately how much is it going to cost the NRC to fully respond to Nye County's appeal?

Ms. MACFARLANE. I do not know.

Mr. DINGELL. If you get some loose time when you get back to the Commission, would you see what you could tell us on that for the record? Now, Madam Chairman, in responses to questions on the record from Chairman Shimkus from July—from the July 24, 2012, hearing, Commissioners who attended that hearing expressed general support on the internal commission procedures implemented in 2011. It is my understandings that these procedures are advised every 2 years, and the Commission is currently in the process of further revising these, is that correct?

Ms. MACFARLANE. That is correct.

Mr. DINGELL. Now, I am going to try to do—you are Polish, aren't you, Commissioner?

Ms. SVINICKI. The name is Slovak. My grandfather came to the upper peninsula of Michigan to work in the iron mines there from Slovakia.

Mr. DINGELL. Svinicki.

Ms. SVINICKI. Well, I have Americanized it to Svinicki, yes.

Mr. DINGELL. I like the Slovak much better. But anyway, in any event, Commissioner, welcome. It is always good to see a University of Michigan graduate.

In your QFR response, you stated that the Commission was gaining operational experience from the 2011 internal procedures. Now that they have been in place for 2 years, do you agree that the internal procedures and the review process allow the Commission to properly carry out its duty in a collegial and collaborative way, yes or no?

Ms. SVINICKI. Yes, and we are.

Mr. DINGELL. Now, would the other Commissioners please give us a yes or no answer on that, too? Sir?

Mr. APOSTOLAKIS. Yes.

Mr. DINGELL. Madam Chairman?

Ms. MACFARLANE. Yes.

Mr. DINGELL. Sir?

Mr. MAGWOOD. Yes.

Mr. OSTENDORFF. Yes.

Mr. DINGELL. Now, do the Commissioners believe that the current ICP are working? Would you each answer yes or no, if you please?

Ms. SVINICKI. Yes, but we do have the procedures under a bia-nual review process. So they can—we are always looking where they might be improved.

Mr. DINGELL. Sir?

Mr. APOSTOLAKIS. Yes and no.

Ms. MACFARLANE. Yes.

Mr. DINGELL. Sir?

Mr. MAGWOOD. Yes.

Mr. OSTENDORFF. Yes, but I agree with Commissioner Svinicki's comment that they are under review again.

Mr. DINGELL. Now, for all the Commissioners, do you believe that every Commissioner's concerns and input have been considered during the current ICP process? In other words, have each of you had your considerations and concern considered in part—in the process? Yes or no, Commissioner Svinicki?

Ms. SVINICKI. Yes, my colleagues evaluated my modifications and approved or disapproved them.

Mr. APOSTOLAKIS. Yes.

Ms. MACFARLANE. Yes, we considered each others.

Mr. DINGELL. Sir?

Mr. MAGWOOD. Yes, we all worked together on it.

Mr. OSTENDORFF. Yes.

Mr. DINGELL. Now, if a Commissioner had suggested a change to the ICP, do you each believe that such a suggestion would be considered in good faith, yes or no?

Ms. SVINICKI. Yes.

Mr. APOSTOLAKIS. Yes.

Ms. MACFARLANE. Yes.

Mr. MAGWOOD. Yes.

Mr. OSTENDORFF. Yes.

Mr. DINGELL. I hope that in no way did you feel distressed at those questions. But I want to see to it that the Commission gets the fullest support of this committee in doing its responsibilities and in having a harmonious process, because God knows you are having enough trouble doing your job down there because of outside interference of all sorts. Thank you, Mr. Chairman, for your courtesy.

Mr. SHIMKUS. The gentleman's time expired. The Chair now recognizes the gentleman from Illinois, Mr. Kinzinger, for 5 minutes.

Mr. KINZINGER. Thank you, Mr. Chairman. And thank you all for being here today. Earlier this year, a letter was sent to the NRC raising concerns about the staff proposal to mandate filter systems. As it happens, the proposal not only failed a cost benefit analysis in which there were serious concerns in regards to an understated cost estimate, but the advisory committee on reactor safeguards—your expert advisory body also disagreed with the proposal's approach.

In the response letter that was received, the NRC stated that has followed has followed its process for ensuring that a sufficient basis exists for imposing regulatory requirements. Chairman Macfarlane, would you agree that the current NRC practice states that a suffi-

cient basis for imposing regulatory requirements means that the change has been shown to be necessary for adequate protection of public health and safety, or as required by the Backfit Rule?

Ms. MACFARLANE. Yes, that is correct.

Mr. KINZINGER. Would any other Commissioners like to comment on that? No?

OK. The issue here is that the NRC staff have tried to override the quantitative analysis related to filtered vents in order to escape a challenge under the NRC's Backfit Rule by recommending that the Commission vote to issue an order. Chairman Macfarlane, isn't that process normally reserved for matters that are necessary for adequate protection of public health and safety?

Ms. MACFARLANE. I don't believe the staff tried to override the Backfit Rule or the cost benefits analysis. I think they did their—a thorough cost benefit analysis according to the information they had.

Mr. KINZINGER. Is that the opinion of all the Commissioners? Sir?

Mr. OSTENDORFF. I want to comment, Congressman. Thank you for the question. I think our staff did an outstanding job of presenting a very difficult issue to the Commission for our decision. And I don't think they tried to circumvent or go around any rule. I think there are certain matters that require judgment. They feed it up to the Commission who made a decision, and we are moving forward. I applaud our staff for their work in this effort.

Mr. KINZINGER. Well, I would like to—I am not going to take all my time, actually. I would like to close by offering my support for Congressman Terry's NRC reform legislation. My friend and I are working on language to limit the Commission's use of orders for only urgent and significant safety needs. A solid line must be issued to ensure discipline in the Agency's processes so that the regulations can provide some actual stability to the issues. With that, Mr. Chairman, I will yield back.

Mr. SHIMKUS. The gentleman yields back his time. The Chair will now recognize Ms. Castor from Florida for 5 minutes.

Ms. CASTOR. Well, good morning, Chairman Macfarlane and Commission members. A decommissioning plan was recently submitted for the Crystal River Nuclear Power Plant in Florida. It is a distressing situation all the way around because the utility attempted to repair the plant. They exacerbated problems, resulting in cracks in the containment walls. The repair costs soared. And so the utility chose to shut it down. It has gotten a lot of attention in Florida and especially among rate payers because they are on the hook because of the law in Florida that said rate payers pay in advance for constructing the plants, and now they are going to be on the hook for those costs and then costs—some of the costs of shutting it down, without generating 1 kilowatt hour of electricity. So this is an important lesson for States around the country to have safeguards if you are going to proceed to have an advance recovery fee.

So they have—the utility has chosen safe storage as the decommissioning option, which will—they estimate will cost \$1.2 billion. And this will proceed now over 60 years to 2074. Could you please review at this point in time, now that you have received the decom-

missioning plan, what the responsibilities are of the NRC in review of that plan and public comment?

Ms. MACFARLANE. Sure. It is—the NRC maintains an oversight role throughout the entire decommissioning of the facility. We continue to inspect the facility, especially during active decommissioning. As—after we receive a—the plan from the licensee, we will hold a public meeting and discuss how the licensee decides to move forward and accept public comment on this. We also strongly encourage our licensees to form community advisory boards for decommissioning process. And, in fact, I did meet with the licensees yesterday and personally encouraged them to do this.

Ms. CASTOR. Terrific. Now, there are other plants around the country that are currently in safe storage. I believe Three Mile Island is. Name a few others that are—

Ms. MACFARLANE. Indian Point 1. Zion was in safe storage. They are now actively decommissioning. So—

Ms. CASTOR. And so in your experience with these plants that are decommissioned and in safe storage, what is the likelihood that the \$1.2 billion cost estimate at this time will remain static, and what is the likelihood that the cost for decommissioning and attention to the plant over time will increase?

Ms. MACFARLANE. You know, I am not that familiar with the costs over long periods of time. So let me take that for the record.

Ms. CASTOR. OK. Do any of the other Commissioners have a comment on that, in the likelihood? OK. On another topic, the Terry bill proposes to legislate how official international travel by all Commissioners is approved. Some might argue that the provision falls into the category of micromanaging the Commission. But if the majority intends to legislate in this area, we need to have a better understanding of the Commissioner's travel. According to information provided by the Commissioner's, some of them have been traveling abroad quite a bit. Now, some of this is to be expected in the wake of the Fukushima disaster.

Commissioner Magwood spent 52 days in 2013 on official foreign travel to Europe, Asia and South America. That is two months of international travel. That seems like quite a lot, more than 100 days of traveling abroad on official business over the last 2 years. And Commissioner Svinicki traveled for 43 days this year internationally. This seems—seems to be bordering on the excessive, and I think we are going to need an accounting here, especially when the primary responsibilities of course are in the United States. Now, I think it is reasonable, you have got to understand what is happening in the field internationally. But since we are expected to markup legislation that addresses this travel, I would like each of the Commissioners to provide for the record an accounting of their international travel, and an explanation of why it is worth the hundreds of thousands of—of taxpayer dollars that it costs. And thank you, and I yield back the rest of my time.

Mr. SHIMKUS. The gentlelady yields back her time. The Chair now recognized the gentleman from Virginia, Mr. Griffith, for 5 minutes.

Mr. GRIFFITH. Thank you, Mr. Chairman. I appreciate you all being here. And as I have said before, one of my first experiences was while there was a fight going on. And so I do appreciate what

all of you have done to create an atmosphere of collegiality. So I do appreciate that.

In regard to Mr. Terry's bill, I happen to agree with him that it doesn't seem like it is too onerous. Perhaps the language can be worked out. Madam Chair, if you will work with him on the language to make it straight? But when I was a kid, there was a TV show, "Lost in Space," and the robot would say, "Danger, Will Robinson! danger!"

Ms. MACFARLANE. I remember it well.

Mr. GRIFFITH. And it seems to me there ought to be some app or way that you can quickly get a message out that would say, "Danger, Will Ostendorff! Danger, Will!" I would ask you as well in regard to the Inspector General's reports, the one on June 6, 2011, and then also the one on June 26, 2012, have you had an opportunity now to read those? The last time, you had just gotten started. And so—

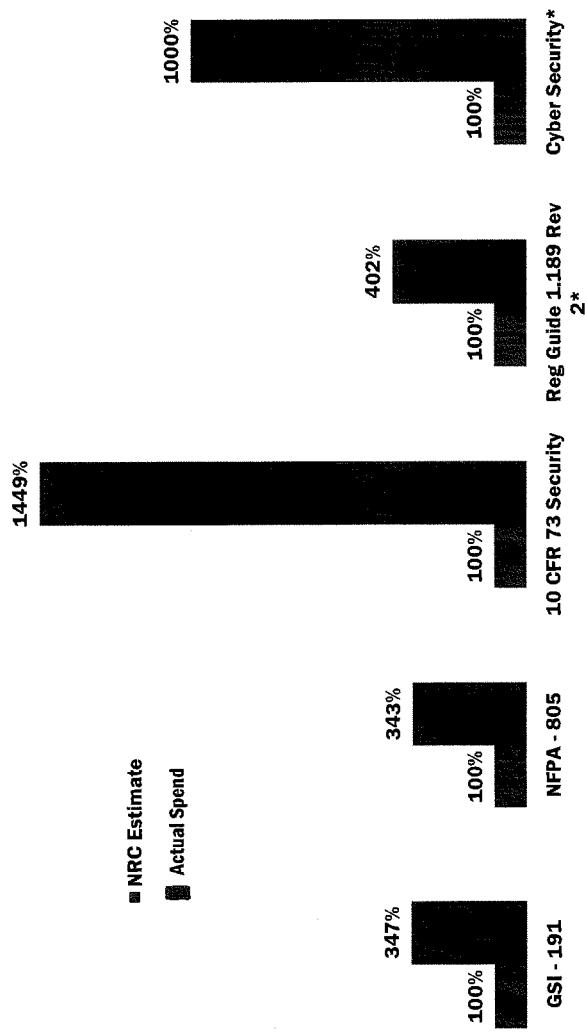
Ms. MACFARLANE. Yes, I have.

Mr. GRIFFITH. You have read those. And that I think is the impetus behind the Terry bill is that in both of those reports, it points out that there was some conflicts over what information could be given to the other members of the Commission by the Chairman, and that led to a lot of the angst that was going on prior to your arrival. So I think that while I support the bill, I am sure that Mr. Terry will work with you in regard to working out some of the glitches that are there that he is trying to do what is right, you are trying to do what is right. I am sure you all can get that worked out.

Now, according to NRC practice, new requirements must be shown to be necessary for adequate protection of public health and safety, or be justified by cost benefit analysis as required by the Backfit Rule. I would like to ask the Clerk to put up the chart "Average Fleet Implementation Cost Compared to NRC Estimates." Do you all have that? There you go.

[The information follows:]

Average Fleet Implementation Cost Compared to NRC Estimates



* Initial estimate was for no additional costs.

Mr. GRIFFITH. When I look at this chart in the context of cost benefit analysis, I wonder how the use of more accurate cost estimates might have impacted the analysis done in support of new requirements. Madam Chair, or any other member, do you have any comment on that?

Ms. MACFARLANE. I am not sure where your numbers come from. I would be happy to examine them more in more detail and get back to you on that.

Mr. GRIFFITH. If you could do that for the record, I would appreciate it very much. Do you have any plans for undertaking any review of previous cost benefit analysis to determine—and I recognize you don't know where these numbers came from. But do you have any plans to determine if there is more accurate cost estimates that might be done? Assuming these numbers to be accurate, do you have any plans to do that, ma'am?

Ms. MACFARLANE. You know, in general, I think our staff does a good job with their cost benefit analyses. And they rely on the best available information.

Mr. GRIFFITH. Yes, ma'am?

Ms. SVINICKI. If I could supplement the Chairman's answer by noting that the Commission has heard evidence of great disparities in the cost estimates. And so we did, as a Commission, direct the NRC staff to work to find case studies and instead of arguing about estimates before the fact, to take a case where we had estimated a cost and the industry has already implemented it, look at what were those actual costs of that particular item. There are some sensitivities on the industry side to sharing some of this business information. But we asked for volunteers to perform what we were calling case studies and looking at some of our regulations. So that way we could look at their actual cost to implement versus our forecast in the hope—and with the objective of maybe improving the accuracy of our cost estimating.

Mr. GRIFFITH. Yes, ma'am. Thank you about that. On a separate topic, there have been, as you all have previously talked about, four nuclear power plants permanently shutdown in the past year. One more will shutdown next year. And reports persist that there may be others. As a result of the decommission process, this has garnered a lot of public interest. But I am particularly concerned about the monies coming in. You talked about the constant money. And, obviously, there is some other money. But decommissioning plants don't pay as much in NRC fees as operating plants. That is correct, is it not?

Ms. MACFARLANE. It is correct.

Mr. GRIFFITH. And so then the question is, as these plants are closing down and your funds are decreasing from what they have been paying as operating plants, how is the NRC going to handle the decreases in funds?

Ms. MACFARLANE. Operating plants are required to establish a decommissioning fund, which they set aside for decommissioning. And we evaluate the amount of money that they have in that fund and their plans for that fund every 2 years.

Mr. GRIFFITH. But I mean over time, after they have decommissioned, if you have fewer plants, there is going to be less money

coming in. Have you all started making plans to deal with that reduction in monies?

Ms. MACFARLANE. I think we are OK right now. But let me get back to you on the record with more detail on this.

Mr. GRIFFITH. I appreciate that very much. And again, thank you for your testimony here today for all—to all of you. And I yield back.

Mr. SHIMKUS. The gentleman yields back his time. The Chair now recognizes the ranking member of the full committee, Mr. Waxman, for 5 minutes.

Mr. WAXMAN. Thank you very much, Mr. Chairman. In my opening statement, I expressed serious concerns about NRC's new policy for responding to congressional requests for nonpublic documents. I would like to read the previous policy: "The Commission's general practice is to provide sensitive documents requested by members of its Congressional oversight committees. It will also provide sensitive documents to other Members of Congress when the documents address matters pertaining to his or her State or district."

I thought that was a reasonable policy. It enabled the members of this committee and members with reactors in their districts to obtain the documents necessary for them to conduct oversight.

The new policy is very different. The NRC will only provide nonpublic documents to the chairman and ranking member of the committee, and it will provide documents only after pursuing alternatives that do not involve producing requested documents. Chairman Macfarlane, do you acknowledge this committee's constitutional responsibility to provide oversight of the Executive Branch?

Ms. MACFARLANE. Of course.

Mr. WAXMAN. And do you concede that in the absence of a claim of Executive Privilege, the NRC has no legal basis to withhold requested nonpublic documents from Congress?

Ms. MACFARLANE. Not from its oversight committees and its—and the chairman.

Mr. WAXMAN. The new policy also provides each Commissioner the opportunity to review documents before they are turned over to Congress and to object to producing specific documents. Chairman Macfarlane, this policy creates a potential for significant delay in responding to oversight requests. How much time are Commissioners given to review documents before they are produced to Congress?

Ms. MACFARLANE. I think we certainly want to maintain a cognizance of what documents are going in which direction. And the decision to produce documents or how we will be responsive, shall I say, is a Commission decision. And, of course, we will operate with the most expediency possible in being responsive to our oversight committees.

Mr. WAXMAN. Well, I have serious questions about allowing individual Commissioners to object to producing specific documents to Congress. The NRC's policy does not explain what a legitimate basis for such an objection might be. And in the absence of a claim of Executive Privilege, there is no legal basis for withholding the documents. Chairman Macfarlane, do you think individual Commissioners should have the right to prevent documents from being

provided to Congress even when there is no legal basis for withholding these documents?

Ms. MACFARLANE. I think—and certainly not. And this—again, I just want to be clear. This is a—moving forward with any kind of document production is a Commission decision.

Mr. WAXMAN. Well, when Congress requests documents, we should get those documents. For some particularly sensitive documents, we need to have discussions about how to protect certain information while meeting Congress' oversight needs.

Ms. MACFARLANE. Yes. Um-hum. Exactly.

Mr. WAXMAN. But I fear this new policy is much too restrictive. Would you commit to thinking through the concerns that we are raising today with your colleagues, and to consider making changes to the policy to address these concerns?

Ms. MACFARLANE. Absolutely. I will consider your concerns.

Mr. WAXMAN. Thank you. And I would like to ask the same question of the other members of the Commission. Will you commit to thinking through these concerns raised today, and to consider making changes to address them?

Ms. SVINICKI. Yes.

Mr. APOSTOLAKIS. Yes.

Mr. MAGWOOD. Yes.

Mr. OSTENDORFF. Yes.

Mr. WAXMAN. I thank you. That is very helpful. And I will look forward to further communications with you. Thank you, Mr. Chairman. Yield back my time.

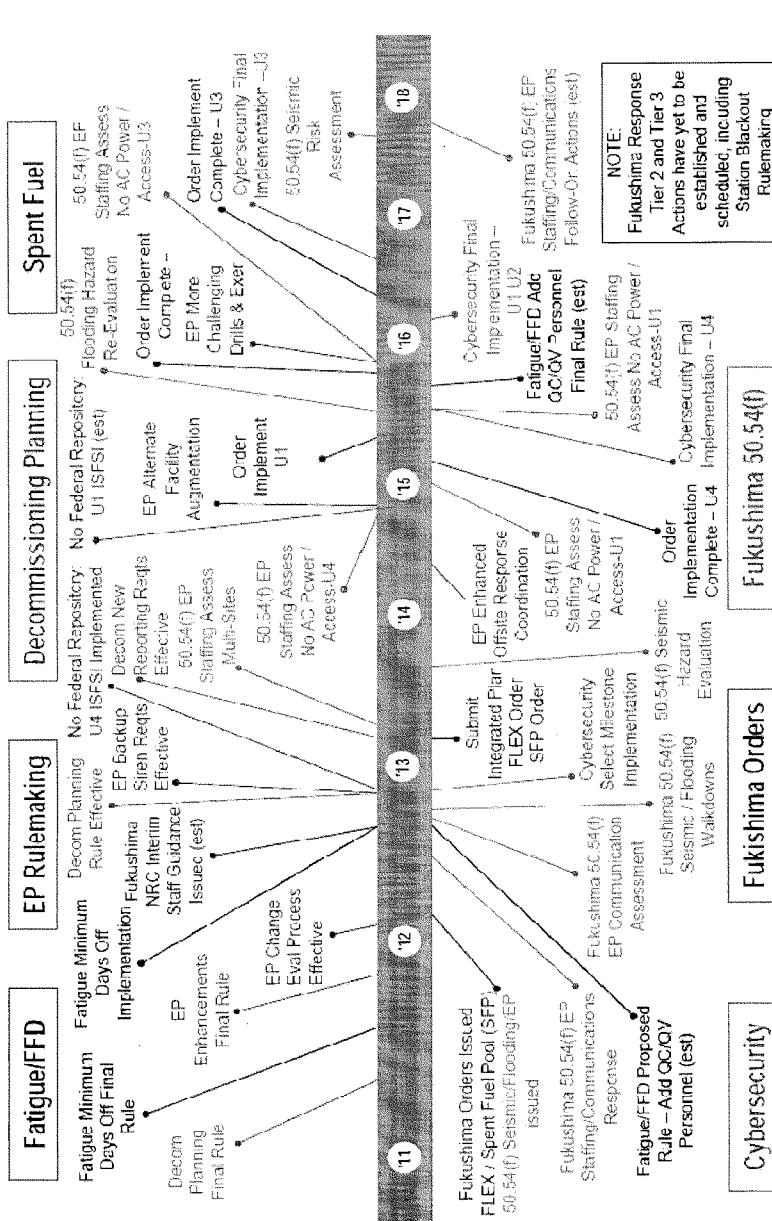
Mr. SHIMKUS. The gentleman yields back his time. The Chair now recognizes the vice chairman of the Energy and Air Quality Subcommittee, Mr. Scalise, for 5 minutes.

Mr. SCALISE. Thank you, Mr. Chairman, appreciate the—having this hearing. Appreciate all of you being back with us today. I know back in February when we had our last hearing on the post-Fukushima requirements, I had asked a few questions. I want to go back to those, because I haven't gotten those back. Maybe you all have that information.

If we can first pull up the slide that—on cumulative effects that we had talked about at the last hearing. Yes.

[The information follows:]

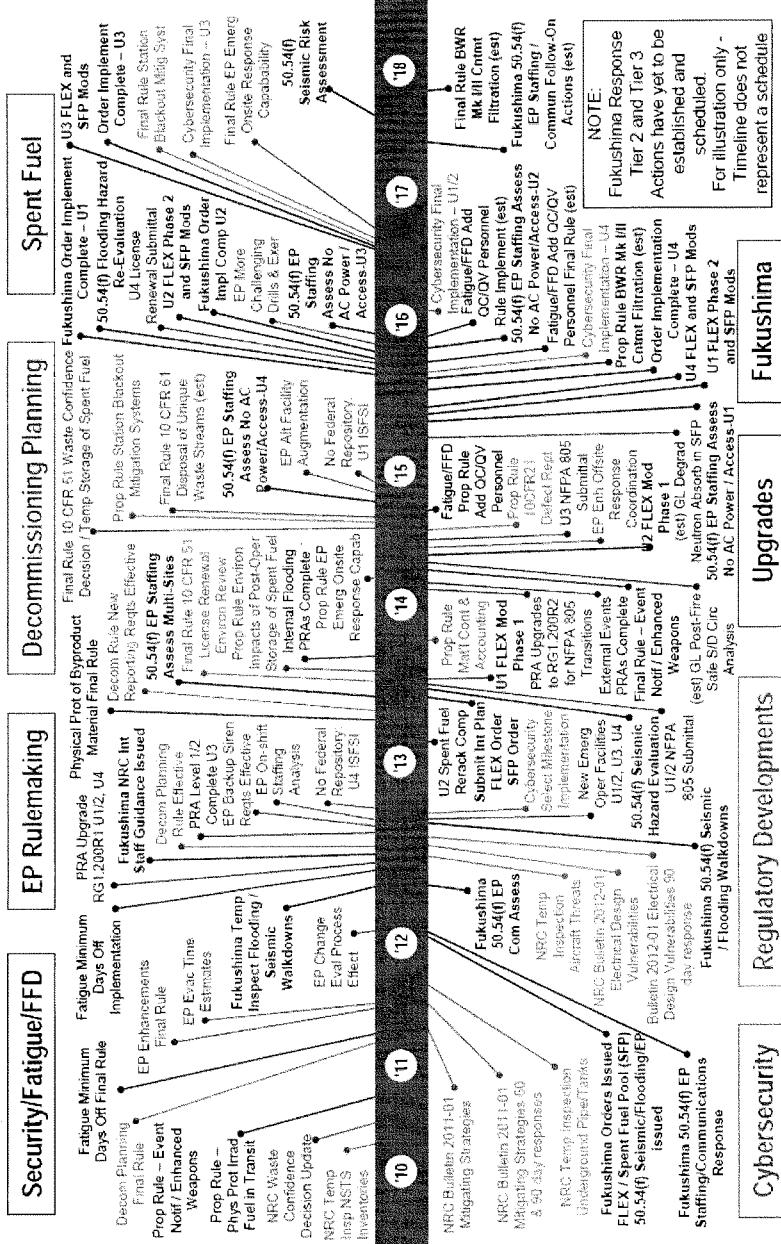
Nuclear Regulatory Timeline (Typical - 4 Unit Fleet)



Mr. SCALISE. That slide there, I had raised—just to show the timeline of regulatory actions for the average owner of four plants. And I pointed out how these are a lot of new requirements in addition to what is already needed for somebody to operate a plant at the highest level of security. And so as you look at the slide, and if you look down in the—I think go to the next slide, because we got—we have got another slide with even more requirements.

[The information follows:]

Nuclear Regulatory Initiatives and Impacts – with Fukushima



Mr. SCALISE. And if you will notice, in the bottom, there is a little box in the bottom right corner that said that this slide still doesn't even reflect the tier 2 and 3 Fukushima items that will be coming. And that is one of the things I had asked about, that is how many of those there are. We were hearing they were 40. There wasn't a number that you all could give me then, but can you give me a number now at how many we are talking about?

Ms. MACFARLANE. How many—

Mr. SCALISE. In addition to all of this?

Ms. MACFARLANE [continuing]. Tier 3 requirements?

Mr. SCALISE. Two or three.

Ms. MACFARLANE. Those are still under discussion at the Commission. We are not yet considering some of the tier 3 requirements.

Mr. SCALISE. OK.

Ms. MACFARLANE. We will see if they will become requirements. We haven't decided yet.

Mr. SCALISE. Do you have a number yet that you can give us a ballpark?

Ms. MACFARLANE. No.

Mr. SCALISE. When will that come out then? When is the plan for that to happen?

Ms. MACFARLANE. The number of items that we will be considering?

Mr. SCALISE. Yes.

Ms. MACFARLANE. I can give you that number for the record.

Mr. SCALISE. Because I asked for that in February, and you said you would give me that for the record. And I still haven't received that from February. When then can I expect to get that?

Ms. MACFARLANE. I apologize for that.

Mr. SCALISE. Can you—

Ms. MACFARLANE. We will give it to you with the—as soon as we can.

Mr. SCALISE. Before next February, hopefully?

Ms. MACFARLANE. Before next February, yes.

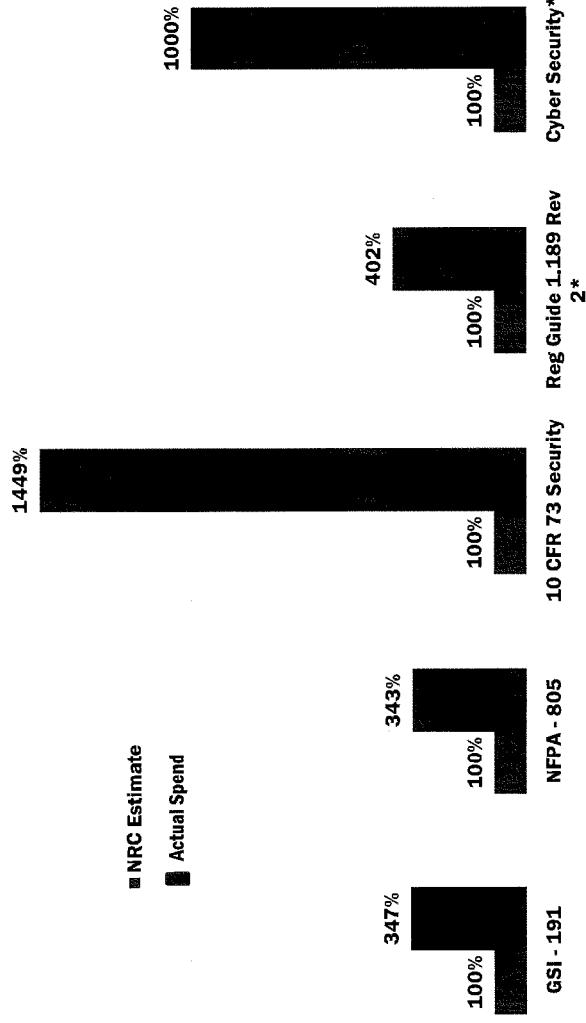
[The information appears at the conclusion of the hearing.]

Mr. SCALISE. That is good. We are making progress here. When we were talking about the cumulative effects, this is an issue that the NRC staff agrees can potentially—"can potentially distract licensee or entity staff from executing other primary duties that ensure safety or security." And so, you know, again, I would emphasize as you are coming up with whatever that number is going to be, 30, 40, 50 new requirements, when you look at that chart and those are things that are already being done, and I think we have seen our facilities have a very high level of security, we sure don't want to be putting things in place that would actually take away from their ability to keep that high level of security when they are already doing a lot of things that are important and effective.

I do want to go now to the next slide, because cost benefit analysis is something that is real important, too.

[The information follows:]

Average Fleet Implementation Cost Compared to NRC Estimates



* Initial estimate was for no additional costs.

Mr. SCALISE. When you are putting these items together that you are putting together with each of these, you would attach, I would imagine, some cost benefit analysis to show what the cost is. Because at the end of the day, it is rate payers, it is hardworking taxpayers that will pay for whatever proposals would come forward. And it has always been a requirement that you attach that. If you look here, this shows a history of the NRC's estimates. When you come up with specific rules, and you can go through—there is a number of rules there that we have seen initially was your cost estimate at NRC. And then ultimately what the true cost was with the—you know, an estimate is nice until you actually find out how it happens in the real world. And just to use these, if you look at the low end, you were 347 percent off on that cost estimate. On the high end, you were 1,449 percent off on your estimate. And each time, the estimate was low-balled. It wasn't like sometimes you are high, sometimes you are low. In all cases, it seemed—I don't know if you all are low-balling the numbers just to make it look like it wasn't going to have that much of an impact on rate payers. But at the end of the day when you look at the real world impacts, it is very dramatic how far off you all have been. And maybe if I can ask everybody on the panel here, what are you all doing to fix this? I mean, this is—when you talk about accountability, if you are off that much, in the same way, you are not—again, it is not—you know, everything kind of factors out if you are doing—maybe you got good modeling. Sometimes you are a little high, sometimes—every time you are low-balling the numbers, and in a dramatic way you are off. In rate payers pay—this tax payers, families that are struggling are paying these costs. And if you come up with a rule and say it is only going to cost this, and it ends up costing 1,449 percent more, that is something that we ought to know before you put that cost on rate payers. So if I could ask everybody, just going down the line, if you can address this problem?

Ms. SVINICKI. The Commission is aware of some of these disparities and has directed the NRC staff to solicit industry volunteers who would be willing to provide their business information regarding actual costs after the fact. So instead of comparing—

Mr. SCALISE. So in addition to all the other requirements you are making them do, you are going to ask them to fix this for you—

Ms. SVINICKI. But we could not compel the provision of this business information by the industry. So we asked the industry if they were interested in volunteering because of some of these disparities. We have gotten a very energetic response that they would like to show us some of the detailed cost estimates so that we could work towards the objective of improving our cost estimating ability by looking retrospectively at how much we were off on some of these and what was the cause of it.

Mr. APOSTOLAKIS. The Commission has directed the staff to re-evaluate and look again at the methodology that they are using for cost benefit calculations. And I believe when we receive the staff's paper, this kind of slide would be very important to consider and ask questions why this is happening and see what—whether the staff would actually have found the reasons for this disparity.

Ms. MACFARLANE. I agree with my colleagues.

Mr. MAGWOOD. I agree with what my colleagues have said. I would add that the fact that we launched this effort to do these case studies indicates that many of us were concerned—we didn't see these particular numbers, but were concerned with the cost estimating situation. It is very important to get this as close as possible. And I for one would like us—like to see us do much better.

Mr. OSTENDORFF. I would just add to my Commission colleagues' comments that our process in working with industry is we encourage industry to provide their own estimates to us. And our staff considers them. And I think in many of these cases—especially I am going to point to the one in the middle, the 10 C.F.R. 73 Security, because I have had discussions with industry and our staff in this area. I think both sides, both the NRC and industry, did not fully understand the complexity of some of these procurements of CCTV systems, motion detector, other security-type aspects. So I think it is a two-way street here. We are not going to pretend to be experts as an Agency in these cost estimate matters by ourselves, and we need industry's help. And I think both sides have recognized the need to do better and work together.

Mr. SCALISE. All right. And, obviously, we got to get that better. Thank you, Ms. Macfarlane. Especially, I look forward to getting that information by February. And, Mr. Chairman, I yield back the balance of my time.

Mr. SHIMKUS. The gentleman yields back his time. The Chair now recognizes the gentleman from New York, Mr. Engel, for 5 minutes.

Mr. ENGEL. Thank you, Mr. Chairman. And thank you all for being here. Thank you for the job you are doing in many ways. It is a very thankless job, but obviously a very important one. And we appreciate it, even though we may have some policy differences from time to time.

Chairman Macfarlane, we have discussed Indian Point in New York in the past. And I want to revisit it again. It is one of the most safety serious issues facing the New York Metropolitan region, and I want to urge continued diligence from the NRC. Indian Point has an operational history that has been plagued by serious questions, unplanned shutdowns, leaking fuel pools, inadequate emergency notification and response systems. All Members of Congress, and I am one, representing the county in which Indian Point is sited have called for its closure, as well as our Governor, as well. So it is not something obviously that we take lightly.

Particularly concerning are the changes that H.R. 3132 would make to the NRC's emergency authorities and response structure. I know others on this committee share my concerns of some of the inadequacies of the response structure brought forth in this legislation. You have heard it. But I would like it if you could address some of those concerns. Under current law, the Chairman of the NRC holds the authorities necessary to save lives and manage disaster. The changes in H.R. 3132, in my opinion, would have the NRC governing crisis by committee. And we all saw how poorly that worked at Fukushima. So I am told—and correct me if I am wrong. Before the Chairman could declare an emergency, you would have to notify the fellow Commissioners, the relevant congressional committees and the general public. The facility could

well be on its way to a meltdown. So I would like to hear from you how you foresee this legislation impacting your ability to manage a potential crisis, specifically in a major metropolitan area like New York?

Ms. MACFARLANE. I think that the Commission procedures are adequate at the Agency. I think the Commission is operating well, operating collegially. And I don't see any need to alter or change the existing procedures, especially with regard to emergency powers.

Mr. ENGEL. Thank you. Anyone else care to comment? If not, I will move on. Chairman Macfarlane, I would also like to ask you, in your testimony you mentioned the efforts the NRC has been undergoing to determine what regulatory action is required to the expedited transfer spent fuel to dry cask storage. I have been particularly interested in that for years, have a bill that does it. And I understand the Commission is evaluating staff assessments and expects a proposal by early 2014. We are all aware of the risks from spent fuel in storage pools that can—and that it can be reduced by moving some of it to dry casks. So can you elaborate on how the NRC is prioritizing the dry cask storage of spent fuel rods, as well as any hurdles that might remain for the implementation of this safer storage system?

Ms. MACFARLANE. We are now in the process of considering whether to require expedited transfer of spent nuclear fuel from the pools at reactors to dry cask storage. And the Commission will be having a commission meeting on this in early January. We have a few papers from the staff that address this issue. And so it is an area of active consideration.

Mr. ENGEL. Well, I thank you for that. And, you know, as I mentioned, I have been concerned about it for awhile. And I am very happy that you are moving forward on it. Let me ask you my last question. Mr. Terry's bill chips away at the authority of the NRC Chairman in a nuclear emergency, as we mentioned. The bill says the Chairman again can declare an emergency only in response to an eminent safety or security threat at a facility in the U.S., or involving nuclear materials directly related by the Commission. Chairman, do you think it makes sense to limit your emergency authority to events involving U.S. based facilities and materials, and are there scenarios in which events in other countries could trigger an emergency in the United States or threaten U.S. citizens? I am told that most of Canada's nuclear power plants are in Ontario, near the U.S. border, near my State—home State of New York. And I am also told that last week, thieves stole a shipment of radioactive cobalt-60 in Mexico, which is an incident that could have had implications for the United States.

Ms. MACFARLANE. I think the Chair needs flexibility to respond to an emergency wherever it is. In particular, in terms of foreign countries, as you point out, Canada has nuclear power plants that are relatively near our border that may pose an emergency for the U.S. I would also like to point out that we—the United States has military personnel in a number of countries that may be near nuclear facilities. If there is an emergency with one of those nuclear facilities, I think the U.S. government would probably want the Nuclear Regulatory Commission to have a full understanding of the

emergency occurring. And so I think we have to make sure we have flexibility to respond to situations in which U.S. citizens are—may be at risk.

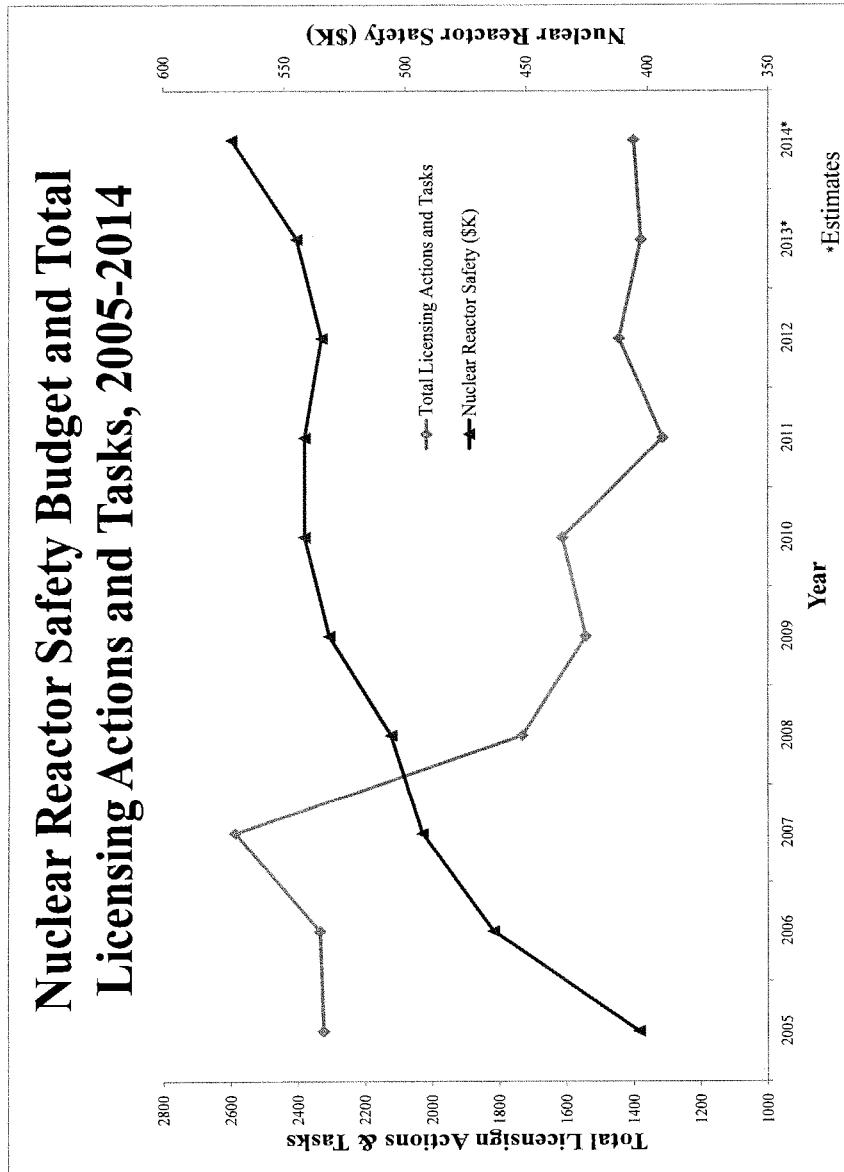
Mr. ENGEL. Thank you very much. Thank you, Mr. Chairman.

Mr. SHIMKUS. The gentleman's time expired. Now, I will show that we have multiple branches of the service. I turn to Colonel Johnson from the great State of Ohio.

Mr. JOHNSON. Well, thank you, Mr. Chairman. And it was only the Air Force. But that is OK. I am good. All of the service are important. And I want to thank the panel for being here with us this morning.

I got a few comments before I get to my question, and then I will ask it to each of you. We have heard a lot this morning about budgets and costs. And when it comes to matters that are truly necessary for the protection of public health and safety of course, cost shouldn't be necessarily the driving factor. However, I am concerned that the NRC and the industry are in a pattern of ever increasing cost chasing ever smaller increments and safety gain. If I could ask the clerk to put up the slide of NRC's nuclear reactor safety budget versus licensing action?

[The information follows:]

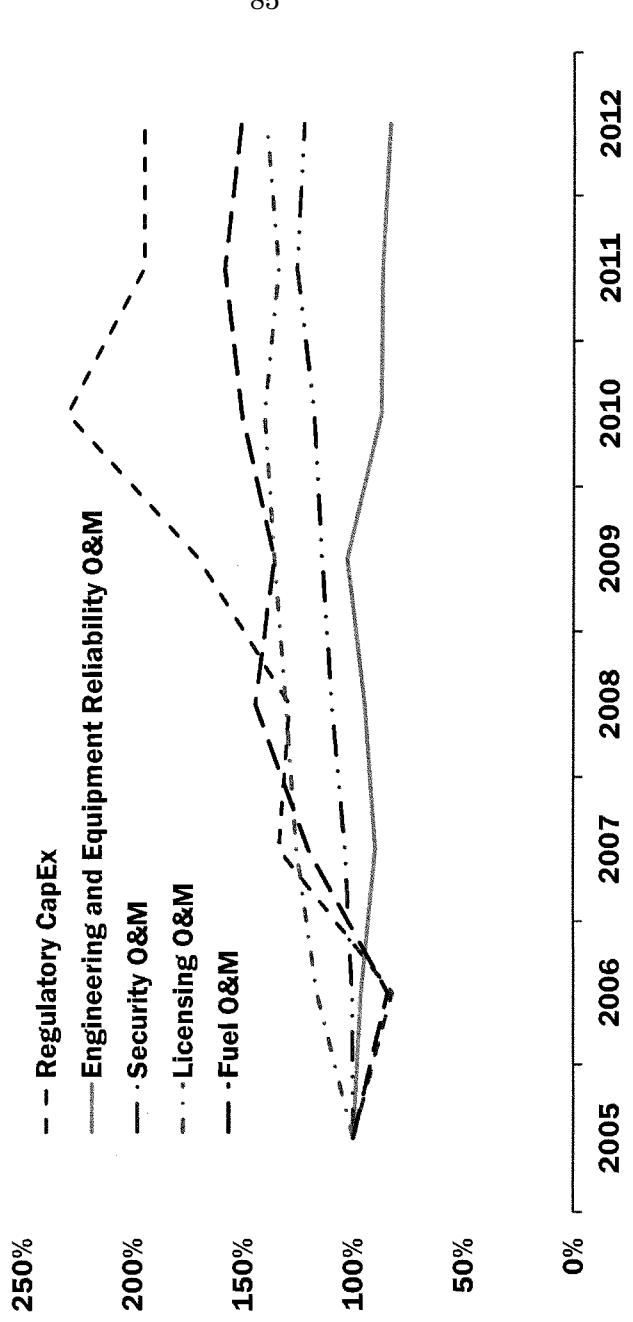


Mr. JOHNSON. This slide shows how the NRC's nuclear safety budget has grown over the last decade. But I want to show you another slide, "Spending on Selected Cost Categories," that shows how the industry's regulatory costs have grown just since 2005.

[The information follows:]

Spending on Selected Cost Categories (Utilities)

2005-2012, Percent change since 2005



Source: Electric Utility Cost Group

Mr. JOHNSON. That red line shows the percentage increase of regulatory capital expenditures compared to what the industry spent in 2005. So that distinct red peak shows that regulatory expenditures in 2012 were about 230 percent of what they were in 2005. The spending has now leveled off at about twice what the industry spent in 2005. I am guessing as the cost of the NRC's post-Fukushima requirements are incurred, this line will trend upward again. I understand one utility has estimated their post-Fukushima cost to be \$400 million. That is \$.4 billion. That is a lot of money.

So the NRC incurs costs in establishing new regulatory requirements. Right now, there are 56 rulemakings listed on the regulations.gov site. The industry incurs costs to implement the requirements. And then the NRC incurs more costs approving and overseeing the industry's implementations. This seems to be a self-reinforcing cycle of regulatory burden. Not only do I question whether this is sustainable over the long term, I am concerned about whether the safety gains are commensurate with these costs.

The NRC's Principles of Good Regulation include reliability, which states that—and I quote, “once established, the regulation should be perceived to be reliable and not unjustifiably in a state of transition” and “should be promptly, fairly, and decisively administered so as to lend stability to the nuclear operational and planning processes.”

Nuclear energy makes a vital contribution to our energy security. It is a pillar in our energy profile. One utility has already cited regulatory burden as a factor in their decision to close the plant prematurely. For plants whose economic viability is threatened, this increasing regulatory burden is a factor that can't be ignored when considering whether to keep operating. Decommissioning shouldn't be the only option that provides regulatory stability.” I think this situation calls for strong leadership from the Commissioners.

Now for the question, and I would like to go down and have each of you answer. What do you think the NRC should do to stabilize this situation and restore some stability to the regulatory environment?

Ms. SVINICKI. Well, I think that the Commission's approach to its post-Fukushima actions does reflect and take into account a number of the concerns that you have just expressed. For example, when presented with a long list of potential areas for regulatory action, the Commission itself took and prioritized those actions into those that would provide the greatest safety benefit. And we acted on those first. So the estimate of how much that red line would go up on your graph once the post-Fukushima actions are completed and all fully implemented is I think some of the costs will be loaded into the early years, because we have acted first on those things that have the greatest benefit to safety. And for the remainder of the actions, we need to strike the right balance between the probability of some of these extreme events and the need to take regulatory action on them.

Mr. JOHNSON. Sir?

Mr. APOSTOLAKIS. I must say I was a little bit disturbed by your several slides that were shown today regarding costs. So I will go back and try to understand better what the reasons are. But as I—and I agree with Commissioner Svinicki's comments. But also, in

my opening statement, I mentioned a few things that the Agency is doing now to deal with the so-called cumulative effects of regulations. So I believe the Commission is aware of these problems, and perhaps we need to do more. So I don't know yet what else we need to do.

Mr. JOHNSON. All right. Commissioner, I am going to let you go last, if that is OK? So let us go to Mr. Magwood.

Mr. MAGWOOD. Thank you. I echo both Commissioner Apostolakis and Commissioner Svinicki. I would also add that as we go through the effort of looking at each one of these regulations, we do look at them in the context of what is necessary. I think each of us of course weighs that differently. And if something is not necessary, we don't approve it. There are times—

Mr. JOHNSON. But the slides indicate that hasn't worked up until now.

Mr. MAGWOOD. And then there are many things that have been proposed that the Commission has not approved. And we have been pretty aggressive about that. So in my view, you know, learning nuclear power plants is not for the faint of heart. And you have to—we have to be able to meet regulatory requirements. And the requirements we put forward I think are appropriate. That said, I think—and Commissioner Apostolakis alluded to this earlier, that there is a very useful—very important conversation taking place within the Agency—and with the Agency and the industry, talking about prioritization of regulations. And this is something I think that if it is successful would enable us to look at regulations in a more holistic manner at each site. And that is really I think the path of the future. And that is how you would best address these issues.

Mr. JOHNSON. Mr. Chairman, I know we are considerably over time, but I would like each panel member to have a chance to answer. If you would indulge us. Sir?

Mr. OSTENDORFF. Thank you for the question. I would just agree with my colleagues' comments, and maybe add two other thoughts. One of them is that we—and Commissioner Magwood mentioned that we have this approved staff recommended enhancements to regulations.

Mr. JOHNSON. I am sure you have.

Mr. OSTENDORFF. Yes.

Mr. JOHNSON. But what we are talking about here are the facts that are in the costs and the gains.

Mr. OSTENDORFF. I understand. I am just telling you—and I will look at our—specifically in our post-Fukushima decisionmaking. You know, perhaps we need to do a better job of coming by to see you and explain these, but we do post—and all of our written notation votes are public. We explain in great detail, every individual Commissioner, as to what decision we have reached and why. And if you go look, I will just highlight 1 decision, the external filter decision from earlier in 2013 where the Commission spent a great deal of time looking at the pros and cons, the cost benefit analyses and came to a decision that did not require installation of an external filtered vent, but gave industry more latitude to develop filtering strategies. So I think there are examples there. We perhaps need to communicate it better.

Mr. JOHNSON. And I agree that there are probably some things that you have done very well. But in all due respect, what you are describing are things that you have done that have—

Mr. SHIMKUS. So my colleague is causing us to be very patient. If you could? If you would—briefly, if you can?

Ms. MACFARLANE. I will keep it short.

Mr. JOHNSON. Thank you.

Ms. MACFARLANE. I agree with my colleagues in the statements they have made. I do think that we are cognizant of the cost benefit analysis. But I just want to remind you that the Atomic Energy Act requires us to not consider costs when the NRC determines that a given regulatory action is required for the adequate protection of nuclear facilities. And that was the case with a number of the orders given post-Fukushima.

Mr. JOHNSON. Thank you, Mr. Chairman, for your indulgence, as well as the committee. Thank you.

Mr. SHIMKUS. The gentleman's time has expired. The Chair now recognizes my colleague, my friend, my congressional classmate, the woman—the gentlelady from Colorado, Ms. DeGette, for 5 minutes.

Ms. DEGETTE. Thank you very much, Mr. Chairman. Good to see you in fine form today. I am happy to see all 5 Commissioners here today, just as everyone else said. And I just have a few questions.

Commissioner Svinicki, you were on the Commission in 2010, is that correct?

Ms. SVINICKI. Yes.

Ms. DEGETTE. I just want to get a little recent history clear. And since you were there, I want to start with you. In that year, in 2010, the DOE filed a Motion with the NRC to withdraw the Yucca Mountain license application, is that correct?

Ms. SVINICKI. Yes, I believe so. I am having to go from my memory on some of these dates.

Ms. DEGETTE. OK. Yes. But the NRC Licensing Board denied the Motion, and the Commission sustained the Licensing Board's denial of the application, is that correct?

Ms. SVINICKI. Yes.

Ms. DEGETTE. But then after the denial of DOE's Motion, the NRC did not continue to review the Yucca application because of budgetary limitations, is that correct?

Ms. SVINICKI. The sequence of events may be a little bit different after the Commission sustained the Licensing Board—it may have been that there was some time that the staff worked to kind of have what we call an orderly closeout of activities. So they may not have happened exactly concurrently.

Ms. DEGETTE. OK. Chairman Macfarlane, what were the budgetary limitations that were involved with the NRC's ceasing of reviewing the Yucca applications, do you know?

Ms. MACFARLANE. I wasn't Chairman then, so I—

Ms. DEGETTE. And you don't know?

Ms. MACFARLANE. I don't know, but I can take that for the record and try to get the answer for you.

Ms. DEGETTE. OK. Now, since that point, the courts have ordered the NRC to continue that review. And you are now complying with those orders, is that correct?

Ms. MACFARLANE. That is correct.

Ms. DEGETTE. Now, you have got about \$11 million—this kind of goes to Mr. Dingell's questions that he was asking. And my staff tells me that you have about \$11 million remaining in the Yucca accounts. And your staff estimates that it will cost about that much to finish the report. Is that correct?

Ms. MACFARLANE. To finish the Safety Evaluation Report, not the licensing.

Ms. DEGETTE. The safety evaluation—that is right. And I just want to say, I would encourage the NRC to keep to those timelines set and to finish the Safety Evaluation Report, because it looks like we have got the money and it is ongoing. And I think it is important to have that. So I just wanted to ask one more question kind of following up on what Mr. Engel was talking about, which is the bill that we are talking about today. And as a number of folks have discussed, the Chairman of the Commission under this bill would not be able to exercise emergency authority with—without consulting with congressional committees, other Commissioners and the public. And like my colleagues, I am kind of worried about how this would work in a crisis. And one thing nobody has asked you, and maybe, Madam Chair, this would be a good thing for you to talk about is if we learned any lessons from Fukushima about what kind of quick response we need to have in a crisis? What lessons have we learned from Fukushima?

Ms. MACFARLANE. Well, we have learned many lessons. But in—

Ms. DEGETTE. But in this particular context?

Ms. MACFARLANE. In this particular context, I think it is important for there to be a person who is in leadership who is in—who can make decisions very quickly. I think that is one of the lessons taken from Fukushima.

Ms. DEGETTE. Because in fact in Japan what happened was there were a lot of layers of bureaucracy that they had to go through, and that delayed decisionmaking, isn't that right?

Ms. MACFARLANE. Yes. And I think that was—these were lessons that the United States learned after the—well, during the Three Mile Island accident.

Ms. DEGETTE. Um-hum. Yes.

Ms. MACFARLANE. And those lessons were then codified into law, and the Nuclear Regulatory Commission was restructured according to those lessons.

Ms. DEGETTE. Great. Thank you. Thank you very much, Mr. Chairman. I appreciate it.

Mr. SHIMKUS. The gentlelady yields back her time. The Chair now recognizes the gentleman from Mississippi, Mr. Harper, for 5 minutes.

Mr. HARPER. Thank you, Mr. Chairman. And thank each of you for being here. And it is encouraging to see a much greater level of cooperation among the Commissioners than perhaps in previous years. And so that does bring some comfort.

And if I may start with you, Madam Chair? When we had discussions previously, I had asked you if you had read and reviewed the NRC Inspector General's conclusions in the June 6, 2011, and June

26, 2012 reports. And at that point, you had not. So I am curious if you have had a chance to do that since?

Ms. MACFARLANE. Yes. Yes, I have.

Mr. HARPER. OK. And that—I know there were revised procedures after the 1 in '11. Have there been any other revisions that I have missed since the June 26, 2012 report as a result of that?

Ms. MACFARLANE. As a result—no, I don't believe so.

Mr. HARPER. OK. Have you taken any actions to address the IG's conclusions that we need to be aware of?

Ms. MACFARLANE. No.

Mr. HARPER. Are there any that you believe you should make based upon the rather comprehensive report in 2012?

Ms. MACFARLANE. No.

Mr. HARPER. OK. Did you agree with those conclusions that were in the report?

Ms. MACFARLANE. I don't take a—

Mr. HARPER. I know I am putting you on the spot with—

Ms. MACFARLANE. I don't take a view on those—

Mr. HARPER. OK.

Ms. MACFARLANE. You know, I wasn't here during that period. So I don't have a view on—

Mr. HARPER. Yes. And I understand you weren't here. But, obviously, we would like to make sure that some of those don't repeat themselves. So I am appreciative that you have read those. And if I may ask, on August 1, the NRC provided its status report on power uprates to the Commission. And, of course, power uprate is the term for the process where a nuclear plant requests approval to increase their power output, correct?

Ms. MACFARLANE. Um-hum.

Mr. HARPER. And to date, the NRC has approved 74 power uprate requests totaling over 7,000 megawatts of additional capacity, roughly the equivalent of 7 new plants. And so this is a well-established practice. That would be true also, wouldn't it?

Ms. MACFARLANE. Um-hum. Yes.

Mr. HARPER. You know, in the staff's report, they indicate that a number of power uprate projects have been canceled, freeing up 3.9 fulltime equivalent reduction of staff work. And the staff also notes how they continue to have challenges in meeting their performance goals, even though the goals for review timeliness were increased 50 percent. Of the 14 applications under review, three were filed in 2004 and another one in 2008. Even though the performance goal for reviewing these applications was less than 12 months, in fact, none of the applications currently under review have met their performance goal. And I will briefly summarize, if I may? It is a well-established program with the decreasing workload, but the staff is falling far short of meeting timeliness goals in spite of these goals being increased 50 percent. To me, that sounds like a program in need of management and accountability. And I will give you an opportunity to respond in a moment.

In the Commission response—what was that? It said it is no longer necessary to provide the Commission the periodic status report on power uprates, and if specific issues arise to inform the Commissioners' assistants accordingly. Employees focus on what their bosses focus on. If timeliness is of no concern to the Commis-

sion, it appears it might not be for the NRC's staff. The Commission's lack of leadership on this issue will only further undermine schedule discipline at the NRC. The Commission's efficiency principle states this, the American taxpayer, the rate paying consumer and licensees are all entitled to the best possible management and administration of regulatory activities. Regulatory decisions should be made without undue delay.

And I would like to hear from each of you on how you think that the Commission would be best be able to restore some stability and predictability to this core program. And if I could ask you that, Madam Chair?

Ms. MACFARLANE. To the power uprate program?

Mr. HARPER. Yes.

Ms. MACFARLANE. Yes. Thank you for the question. Of course, we are concerned with working as efficiently and as effectively as possible, always, and in terms of power uprates as well. We have been working under specific circumstances the past year—year or two. In particular, this past year, we have suffered like many agencies, sequestration, which has affected our ability to be responsive in a number of areas. And power uprates may be one of those. In addition to which, we have taken on additional work for waste confidence that has redirected staff resources for Fukushima and being responsive to that. That has redirected staff resources as well. And then we have the piece of the industry responsiveness. And, again, I go back to statements I have made earlier that when we receive applications from licensees, we need high quality applications that don't generate a number of answers, and then we need efficient responses as well.

Mr. HARPER. And I see my time has expired. And I yield back. Thank you.

Mr. SHIMKUS. The gentleman yields back his time. And we want to thank you all. A few short comments. And if Mr. Tonko wants to add. I was invited to and attended the Yucca economic symposium put on by Nevadans in Reno a couple weeks ago. So I just throw that out as an interesting comment. A lot of the comments today by my colleagues I think were based upon I think the industry fears it is on a knife edge with nat gas pressures and this cumulative effect of regulation. And so I think that is that balance that you may have heard from a lot of my colleagues. And in a commission form of government, the Chairman is responsible for agendas and the staff, but you are all still one among equals on casting votes. And whether that is at the municipal level or whether that is at the level—and we applaud the camaraderie and moving forward and what we have been able to do.

I do have one—two announcements. One is Vinnie Esposito's last day as our nuclear fellow. He has been tremendously helpful to us and to me personally. And I want to wish him God speed and thanks for your help. I would like to finish by thanking you all for coming. It was a long hearing. But it was a good one. And I think we all learned a lot. I want to remind members that they have 10 business days to submit additional questions for the record. And as promptly as you can, a response to those, we would appreciate that. And I would say the hearing is now adjourned.

[Whereupon, at 12:50 p.m., the subcommittees were adjourned.]

[Material submitted for inclusion in the record follows:]

**Opening Statement of the Honorable Fred Upton
Subcommittees on Energy and Power & Environment and the Economy
Hearing on "Oversight of NRC Management and the Need for Legislative Reform"
December 12, 2013**

(As Prepared for Delivery)

We welcome back Chairman McFarlane and the commissioners.

I was pleased to see the commission's conclusions in its November 18th order to resume review of the Yucca Mountain license application. That is a long-overdue and vital task. Resumption of the Yucca Mountain program remains the clearest, fastest, and most fiscally responsible way for the government to meet its obligation to provide disposal, mitigate liability costs, and reestablish a solid basis for the waste confidence rule. I'm eager to hear when the NRC anticipates releasing the long-awaited Safety Evaluation Report.

In a recent letter to the commission, Chairmen Shimkus and Whitfield raised issues about the NRC's efficient use of resources. It's disconcerting to see that the NRC's budget has grown yet the agency seems to struggle to conclude fundamental work in a timely fashion. This is an area where I expect we will be focusing more attention in the future.

I commend my colleague, Lee Terry, for taking the initiative to draft legislation to address commission challenges related to governance and structure. Some of these concerns came to light during the previous NRC chairman's tenure and we want to be sure that such problems do not recur.

While I am pleased with Chairman McFarlane's leadership style and relieved to see the commission once again functioning as a collegial body as it should, these governance issues also should be addressed to make sure all commissioners can contribute effectively to agency decision-making and staff are properly accountable to the commission and to the public whom they serve.

There is no question that the NRC is one of our most important agencies, and it is critical we do what we can to optimize its performance.

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I

113TH CONGRESS
1ST SESSION **H. R. 3132**

To ensure orderly conduct of Nuclear Regulatory Commission actions.

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 18, 2013

Mr. TERRY introduced the following bill; which was referred to the Committee on Energy and Commerce

A BILL

To ensure orderly conduct of Nuclear Regulatory Commission actions.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Nuclear Regulatory
5 Commission Reorganization Plan Codification and Com-
6 plements Act”.

1 **TITLE I—REPLACEMENT OF 2 REORGANIZATION PLAN**

3 **SEC. 101. GENERAL FUNCTIONS.**

4 (a) FUNCTIONS.—Those functions of the Nuclear
5 Regulatory Commission (in this title referred to as the
6 “Commission”) concerned with—

7 (1) policy formulation;

8 (2) rulemaking, as defined in section 553 of
9 title 5 of the United States Code, except that those
10 matters set forth in 553 (a)(2) and (b) which do not
11 pertain to policy formulation orders or adjudications
12 shall be reserved to the Chairman of the Commis-
13 sion;

14 (3) orders and adjudications, as defined in sec-
15 tion 551 (6) and (7) of title 5 of the United States
16 Code; and

17 (4) approving the distribution of appropriated
18 funds according to programs and purposes proposed
19 by the Executive Director for Operations,

20 shall remain vested in the Commission. A majority of the
21 Commission may determine, in an area of doubt, whether
22 any matter, action, question, or area of inquiry pertains
23 to one of these functions. Any member of the Commission
24 may request such a vote. Any member of the Commission
25 may propose a policy matter for consideration by the Com-

1 mission. All members of the Commission shall have full,
2 unfettered, timely, and equal access to information per-
3 taining to its functions. The performance of any portion
4 of these functions may be delegated by the Commission
5 to a member of the Commission, including the Chairman
6 of the Commission (in this title referred to as the "Chair-
7 man") and to the staff.

8 (b) OFFICERS AND EMPLOYEES.—

9 (1) OFFICERS.—With respect to the following
10 officers or successor officers duly established by stat-
11 ute or by the Commission, the Chairman shall ini-
12 tiate the appointment, subject to the approval of the
13 Commission, and the Chairman or a member of the
14 Commission may initiate an action for removal, sub-
15 ject to the approval of the Commission by majority
16 vote:

17 (A) Executive Director for Operations.

18 (B) Chief and Deputy Chief Financial Of-
19 ficer.

20 (C) General Counsel.

21 (D) Director of the Office of Commission
22 Appellate Adjudication.

23 (E) Secretary of the Commission.

24 (F) Director of the Office of Public Af-
25 fairs.

1 (G) Director of the Office of Congressional
2 Affairs.

3 (H) Director of the Office of International
4 Programs.

5 (I) Chief Administrative Judge and mem-
6 bers of the Atomic Safety and Licensing Board
7 Panel.

8 Any performance evaluation or rating of the officers
9 listed in subparagraphs (A) through (I) shall be de-
10 termined by a majority vote of the members of the
11 Commission.

12 (2) REPLACEMENT OF OFFICERS.—(A) In the
13 event of a vacancy in a position described in para-
14 graph (1), the Chairman may designate an acting
15 officer for a maximum of 60 days, after which any
16 further extension must be approved by the Commis-
17 sion. If, at the end of 60 days, the Commission has
18 not approved the appointment of an officer proposed
19 by the Chairman, or the Chairman has not proposed
20 one, any Commissioner may initiate the appointment
21 subject to approval of the Commission.

22 (B) With respect to the following officers or
23 successor officers duly established by statute or by
24 the Commission, the Chairman, after consultation
25 with the Executive Director for Operations, shall ini-

1 tiate the appointment, subject to the approval of the
2 Commission, and the Chairman, or a member of the
3 Commission may initiate an action for removal, sub-
4 jeet to the approval of the Commission by majority
5 vote:

6 (i) Director of the Office of Nuclear Reac-
7 tor Regulation.

8 (ii) Director of the Office of Nuclear Mate-
9 rial Safety and Safeguards.

10 (iii) Director of the Office of Nuclear Reg-
11 ulatory Research.

12 (iv) Director of the Office of Nuclear Secu-
13 rity and Incident Response.

14 (v) Director of the Office of New Reactors.

15 (vi) Director of the Office of Federal and
16 State Materials and Environmental Manage-
17 ment Programs.

18 (vii) Director of the Office of Investiga-
19 tions.

20 (viii) Director of the Office of Enforce-
21 ment.

22 (3) APPOINTMENT OF ADVISORY COMMITTEE
23 ON REACTOR SAFEGUARDS.—The Chairman or a
24 member of the Commission shall initiate the ap-
25 pointment of the Members of the Advisory Com-

1 mittee on Reactor Safeguards, subject to the ap-
2 proval of the Commission. The provisions for ap-
3 pointment of the Chairman of the Advisory Com-
4 mittee on Reactor Safeguards and the term of the
5 members shall not be affected by the provisions of
6 this title.

7 (4) DELEGATION OF STAFF SUPERVISION
8 FUNCTIONS.—The Commission shall delegate the
9 function of appointing, removing, and supervising
10 the staff of the following offices or successor offices
11 to the respective heads of such offices: Executive Di-
12 rector for Operations, General Counsel, Secretary of
13 the Commission, Chief Financial Officer, Office of
14 Commission Appellate Adjudication, Office of Con-
15 gressional Affairs, Office of Public Affairs, and Of-
16 fice of International Programs. The Commission
17 shall delegate the functions of appointing, removing,
18 and supervising the staff of the following panels and
19 committees to the respective Chairmen thereof: Atom-
20 ic Safety and Licensing Board Panel and Advisory
21 Committee on Reactor Safeguards.

22 (c) COMMISSION MEMBER OFFICES.—Each member
23 of the Commission shall appoint, remove, and supervise
24 the personnel employed in his or her immediate office.

1 (d) PERFORMANCE OF FUNCTIONS.—The Commission
2 shall act as provided by section 201(a)(1) of the Energy
3 Reorganization Act of 1974 (42 U.S.C. 5841(a)(1))
4 in the performance of its functions as described in sub-
5 sections (a) and (b) of this section.

6 **SEC. 102. CHAIRMAN.**

7 (a) FUNCTIONS.—Except as otherwise provided in
8 section 101, all functions of the Commission shall rest
9 with the Chairman. The Chairman shall be the official
10 spokesman for the Commission and, as such, shall represent
11 the policies determined by a majority of the Commission.
12

13 (b) ADDITIONAL FUNCTIONS.—The Chairman shall
14 also be the principal executive officer of the Commission,
15 and shall be responsible to the Commission for assuring
16 that the Executive Director for Operations and the staff
17 of the Commission (other than the officers and staff referred
18 to in section 101 (b)(4) and (e)) are responsive to
19 the requirements of the Commission in the performance
20 of its functions; shall determine the use and expenditure
21 of funds of the Commission, in accordance with the distribution
22 of appropriated funds according to programs and
23 purposes approved by the Commission; shall present to the
24 Commission for its consideration the proposals set forth
25 in paragraph (3); and shall be responsible for the following

1 functions, which the Chairman shall delegate, subject to
2 the Chairman's direction and supervision, to the Executive
3 Director for Operations unless otherwise provided by this
4 Act:

5 (1) Administrative functions of the Commission.
6 (2) Distribution of business among such per-
7 sonnel and among administrative units and offices of
8 the Commission.

9 (3) Preparation of proposals for the reorganiza-
10 tion of the major offices of the Commission.

11 (4) Appointing and removing, without any fur-
12 ther action by the Commission, all officers and em-
13 ployees under the Commission other than those
14 whose appointment and removal are specifically pro-
15 vided for by section 101 (b) and (e).

16 (e) GOVERNING PRINCIPLES.—

17 (1) IN GENERAL.—The Chairman as principal
18 executive officer and the Executive Director for Op-
19 erations shall be governed by the general policies of
20 the Commission and by such regulatory decisions,
21 findings, and determinations, including those for re-
22 organization proposals, budget revisions, and dis-
23 tribution of appropriated funds, as the Commission
24 may by law, including this title, be authorized to
25 make.

1 (2) FULL AND CURRENT INFORMATION.—The
2 Chairman and the Executive Director for Operations
3 shall have joint responsibility insuring that the Com-
4 mission is fully and currently informed about mat-
5 ters within its functions.

6 (3) FAILURE TO ACT IN ACCORDANCE.—If a
7 majority of Commissioners determine that the Chair-
8 man has not acted in accordance with paragraph (1)
9 or (2), such Commissioners shall provide written no-
10 tice of the determination to the President and pro-
11 vide copies thereof to the Committee on Energy and
12 Commerce of the House of Representatives and the
13 Committee on Environment and Public Works of the
14 Senate.

15 **SEC. 103. EMERGENCY AUTHORITY.**

16 (a) IN GENERAL.—Notwithstanding sections 101 and
17 102, the Chairman is authorized to exercise emergency au-
18 thority described in paragraph (4), subject to the following
19 limitations:

20 (1) The Chairman may not exercise emergency
21 authority unless and until the Chairman declares a
22 specific emergency exists and, not later than 24
23 hours after such declaration, notifies—

24 (A) the Commission, the Committee on
25 Energy and Commerce of the House of Rep-

1 resentatives, and the Committee on Environment
2 and Public Works of the Senate, in writing; and

4 (B) the public.

5 (2) The Chairman may only exercise emergency
6 authority in response to—

7 (A) an imminent safety threat pertaining
8 to a facility or materials licensed or regulated
9 by the Commission; or

10 (B) a determination by the Secretary of
11 Homeland Security, the Seeretary of Energy,
12 the Secretary of Transportation, the Director of
13 the Federal Bureau of Investigation, the Director
14 of the Central Intelligence Agency, or the
15 Director of National Intelligence of an immin-
16 ent security threat to a facility or materials li-
17 censed or regulated by the Commission.

18 Where authority is exercised pursuant to this sec-
19 tion, public notification may be delayed provided
20 that the Chairman determines that prior public dis-
21 closure would constitute a risk to public health and
22 safety and so notifies the Commission, the Com-
23 mittee on Energy and Commerce of the House of
24 Representatives, and the Committee on Environment
25 and Public Works of the Senate.

1 (3) The Chairman may only exercise emergency
2 authority for the duration of the emergency or 30
3 days, whichever is less. The Commission may ap-
4 prove extensions of that time. Each extension is lim-
5 ited to 30 days and requires notification of the pub-
6 lic, the Committee on Energy and Commerce of the
7 House of Representatives, and the Committee on
8 Environment and Public Works of the Senate.

9 (4) The Chairman's emergency authority in-
10 cludes the functions of responding to, issuing orders
11 respecting, advising United States civil authorities
12 and the United States public about, and directing
13 and coordinating actions relative to such emergency
14 incident.

15 (b) DELEGATION.—The Chairman may delegate the
16 authority to perform such emergency functions, in whole
17 or in part, to any of the other members of the Commission.
18 Such authority may also be delegated or redelegated, in
19 whole or in part, to the staff of the Commission.

20 (c) CONSULTATION.—To the extent practicable, the
21 Chairman shall consult with the full Commission on any
22 regulatory or policy actions to be taken under an emer-
23 gency. Such consultations shall be exempt from the re-
24 quirements of section 552b of title 5, United States Code

1 (commonly referred to as the "Government in the Sun-
2 shine Act").

3 (d) GUIDELINES AND NOTICE.—In acting under this
4 section, the Chairman, or other member of the Commis-
5 sion delegated authority under subsection (b), shall con-
6 form to the policy guidelines of the Commission.

7 (e) TERMINATION OF EMERGENCY.—Upon termi-
8 nation of the emergency, the Chairman shall immediately
9 notify the Commission, the public, the Committee on En-
10 ergy and Commerce of the House of Representatives, and
11 the Committee on Environment and Public Works of the
12 Senate.

13 (f) REPORT.—Within 30 days following the conclu-
14 sion of the emergency, the Chairman, or the member of
15 the Commission or member of the staff delegated the
16 emergency functions under subsection (b), shall render a
17 complete report of all actions taken during the emergency,
18 specifically delineating actions taken utilizing the author-
19 ity provided in this section, to the Commission, the Com-
20 mittee on Energy and Commerce of the House of Rep-
21 resentatives, and the Committee on Environment and
22 Public Works of the Senate.

23 (g) COMMISSION PROCEDURES.—Not later than 90
24 days after the date of enactment of this Act, the Commis-
25 sion shall revise its procedures to comply with the require-

1 ments of this section. Such revision shall define the roles
2 of the Commissioners during an emergency, specifying—

3 (1) complete access to records and information
4 relating to actions taken during the emergency;

5 (2) complete access to Commission staff in-
6 volved in the management of the emergency;

7 (3) complete access to the location or locations
8 where decisions are made during the emergency; and

9 (4) participation in decisions that may affect
10 Commission actions and policies beyond the response
11 to a particular emergency to the extent practicable.

12 **SEC. 104. REPORTING.**

13 (a) DELEGATION; DIRECT COMMUNICATION.—The
14 Chairman may make such delegations and provide for
15 such reporting as the Chairman deems necessary, subject
16 to provisions of law. Any officer or employee under the
17 Commission may communicate directly to the Commission,
18 or to any member of the Commission, whenever in the view
19 of such officer or employee a critical problem, or matter
20 of public health and safety or common defense and secu-
21 rity, is not being properly addressed.

22 (b) EXECUTIVE DIRECTOR FOR OPERATIONS.—The
23 Executive Director for Operations shall report for all mat-
24 ters to the Chairman.

1 (c) FUNCTIONS.—The Directors of Nuclear Reactor
2 Regulations, Nuclear Material Safety and Safeguards, and
3 Nuclear Regulatory Research shall report to the Executive
4 Director for Operations.

5 (d) DIRECT REPORTING.—The heads of the Commis-
6 sion level offices or successor offices, of General Counsel,
7 Secretary of the Commission, Commission Appellate Adju-
8 dication, Congressional Affairs, Public Affairs, Inter-
9 national Programs, Atomic Safety and Licensing Board
10 Panel, and Advisory Committee on Reactor Safeguards
11 shall report directly to the Commission and the Commis-
12 sion shall receive such reports.

13 **SEC. 105. RESCISSION OF REORGANIZATION PLAN AP-**
14 **PROVAL.**

15 Approval of Reorganization Plan No. 1 of 1980 (5
16 U.S.C. App. 1) is rescinded.

17 **TITLE II—MISCELLANEOUS**

18 **SEC. 201. CERTIFICATION OF DOCUMENTS TRANSMITTED**
19 **TO CONGRESS.**

20 A letter or other document transmitted by the Nu-
21 clear Regulatory Commission, on behalf of the full Com-
22 mission, to a member of Congress in his or her capacity
23 as chairman or ranking minority member of a Committee
24 of Congress, shall include a certification that the letter
25 or document is being sent to both the Chairman and rank-

1 ing minority member of that Committee in accordance
2 with established Commission proeedures.

3 **SEC. 202. TIME LIMITS FOR COMMISSION REVIEW OF ATOM-**
4 **IC SAFETY AND LICENSING BOARD DECI-**
5 **SIONS.**

6 When reviewing the decisions and actions of the
7 Atomic Safety and Licensing Board, the Commission shall
8 follow the following proeedures:

9 (1) Each Commissioner shall vote on the matter
10 not later than 90 days after receipt of final briefs,
11 after which time the Commission shall not further
12 delay a decision. Once a majority position is estab-
13 lished, the Secretary shall notify in writing any
14 Commissioners who have not voted that a majority
15 position has been established. Any Commissioners
16 who have not yet voted shall vote within three days
17 of the Seeretary's notice or be considered by the
18 Secretary as not participating.

19 (2) Not later than 30 days after a majority po-
20 sition is established, the Commission shall publish
21 any resulting decision, including adjudicatory orders
22 and direction to agency staff. If a majority position
23 is not established due to a tied vote, not later than
24 30 days after Commission voting is complete, the
25 Commission shall publish any resulting decision, in-

1 cluding adjudicatory orders and direction to agency
2 staff.

3 **SEC. 203. ALLEGATIONS OF WRONGDOING.**

4 (a) REFERRAL TO INSPECTOR GENERAL.—Not later
5 than 90 days after the date of enactment of this Act, the
6 Nuclear Regulatory Commission shall revise its procedures
7 to ensure that any allegation of wrongdoing on the part
8 of the Chairman of the Commission is immediately re-
9 ferred to the Inspector General of the Commission.

10 (b) SUPERVISION OF INSPECTOR GENERAL.—During
11 the pendency of any investigation by the Inspector General
12 of the Chairman with respect to an allegation described
13 in subsection (a), the Chairman shall delegate responsi-
14 bility for supervising the Inspector General to a member
15 of the Commission other than the Chairman, consistent
16 with the Inspector General Act of 1978.

17 **SEC. 204. APPROVAL OF COMMISSIONER TRAVEL.**

18 The Chairman of the Nuclear Regulatory Commis-
19 sion shall authorize all international travel requested by
20 other members of the Commission for official business un-
21 less the Chairman submits a notice of disapproval to the
22 full Commission specifying the basis for the disapproval.
23 The notice of disapproval shall be submitted within 5 days
24 after the travel is requested or the travel shall be deemed
25 approved.

1 SEC. 205. IMPLEMENTATION.

2 Except as otherwise specified in this Act, the Com-
3 mission shall revise its procedures to conform to this Act
4 within 180 days of its date of enactment.



FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS
Congress of the United States
House of Representatives
 COMMITTEE ON ENERGY AND COMMERCE
 2125 RAYBURN HOUSE OFFICE BUILDING
 WASHINGTON, DC 20515-6115

Majority (202) 225-2927
 Minority (202) 225-3641
 January 15, 2014

The Honorable Allison M. Macfarlane
Chairman
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Macfarlane:

Thank you for appearing before the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy on Thursday, December 12, 2013, to testify at the hearing entitled "Oversight of NRC Management and the Need for Legislative Reform."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

Also attached are Member requests made during the hearing. The format of your responses to these requests should follow the same format as your responses to the additional questions for the record.

To facilitate the printing of the hearing record, please respond to these questions and requests with a transmittal letter by the close of business on Wednesday, January 29, 2014. Your responses should be e-mailed to the Legislative Clerk in Word format at Nick.Abraham@mail.house.gov and mailed to Nick Abraham, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



Ed Whitfield
Chairman
Subcommittee on Energy and Power



John Shimkus
Chairman
Subcommittee on Environment
and the Economy

cc: The Honorable Bobby L. Rush, Ranking Member, Subcommittee on Energy and Power
 The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachments



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 26, 2014

The Honorable Ed Whitfield
Chairman, Subcommittee on Energy and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20510

Dear Mr. Chairman:

The U.S. Nuclear Regulatory Commission appeared before the Committee on Energy and Commerce, Subcommittee on Energy and Power and Subcommittee on Environment and the Economy, on December 12, 2013, at a hearing entitled, "*Oversight of NRC Management and the Need for Legislative Reform.*" From that hearing, you forwarded questions to Chairman Macfarlane on behalf of the Commission, and questions specifically for Chairman Macfarlane for the hearing record. The responses to those questions are enclosed. If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Amy Powell".

Amy Powell, Acting Director
Office of Congressional Affairs

Enclosure:
As stated

cc: The Honorable Bobby L. Rush, Ranking Member
Subcommittee on Energy and Power



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 26, 2014

The Honorable John Shimkus
Chairman, Subcommittee on Environment and the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20510

Dear Mr. Chairman:

The U.S. Nuclear Regulatory Commission appeared before the Committee on Energy and Commerce, Subcommittee on Energy and Power and Subcommittee on Environment and the Economy, on December 12, 2013, at a hearing entitled, "*Oversight of NRC Management and the Need for Legislative Reform.*" From that hearing, you forwarded questions to Chairman Macfarlane on behalf of the Commission, and questions specifically for Chairman Macfarlane for the hearing record. The responses to those questions are enclosed. If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

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Amy Powell, Acting Director
Office of Congressional Affairs

Enclosure:
As stated

cc: The Honorable Paul Tonko, Ranking Member
Subcommittee on Environment and the Economy

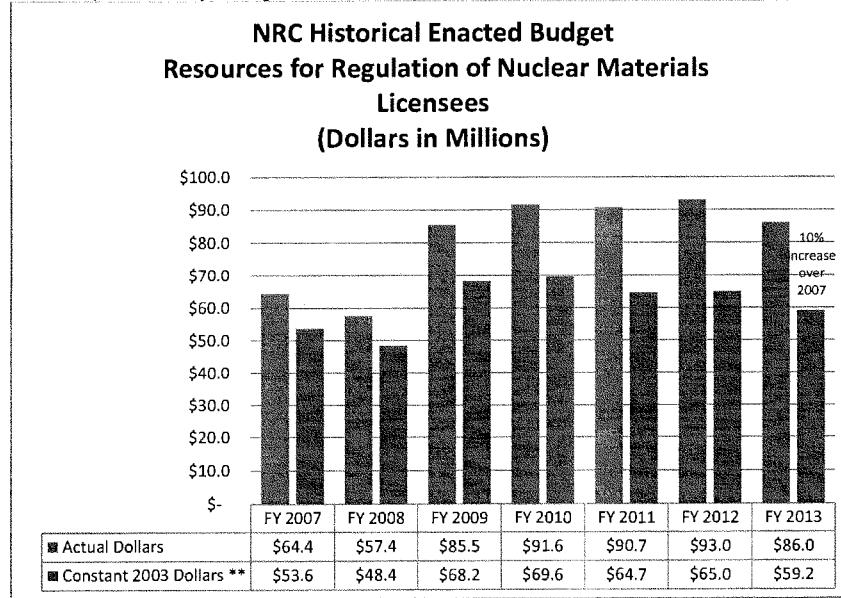
Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable Ed Whitfield

QUESTION 1. Chairman Macfarlane displayed a chart of NRC resources in “constant dollars since 2007 noting that the Yucca Mountain and post-Fukushima requirements were included in those resources. How much have resource expenditures declined in actual and constant dollars in regulating materials licensees since 2007?

Answer.

NRC resources for the regulation of materials licensees are budgeted and expended in the Nuclear Materials Users Business Line. These resources support the licensing; oversight; rulemaking; international activities; research; generic homeland security; event response; and State, Tribal, and Federal Program activities associated with the safe and secure possession, processing, handling, and use of nuclear materials.

In fiscal year (FY) 2007, the NRC's enacted budget for Nuclear Materials Users was \$64.4 million in actual dollars. In FY 2013, the enacted budget was \$86.0 million in actual dollars, a 34 percent increase over FY 2007. When converted to the constant 2003 dollars shown in the chart displayed by Chairman Macfarlane, the FY 2007 Enacted budget for Nuclear Materials Users was \$53.6 million. In FY 2013, the Enacted budget was \$59.2 million in constant 2003 dollars, a 10 percent increase over FY 2007. These dollars do not include the regulatory activities performed by the Agreement States programs.



Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable Ed Whitfield

QUESTION 2. How many permanently shut down plants have already undergone decommissioning?

ANSWER.

To date, 11 nuclear power plants licensed by the NRC have completed decommissioning. These are:

- Big Rock Point, Charlevoix, MI, Shutdown: 8/29/1997
- Fort St. Vrain, Platteville, CO, Shutdown: 8/18/1989
- Haddam Neck, Meriden, CT, Shutdown: 12/5/1996
- Maine Yankee, Wiscasset, ME, Shutdown: 12/6/1996
- Pathfinder, Sioux Falls, SD, Shutdown: 9/16/1967
- Rancho Seco, Herald, CA, Shutdown: 6/7/1989
- Saxton, Saxton, PA, Shutdown: 5/1/1972
- Shippingport, Shippingport, PA, Shutdown: 1982
- Shoreham, Wading River, NY, Shutdown: 6/28/1989
- Trojan, Rainier, OR, Shutdown: 11/9/1992
- Yankee-Rowe, Rowe, MA, Shutdown: 10/1/1991

a. **Have they done so safely and in accordance with NRC requirements, regardless of whether the plant was decommissioned immediately or under the NRC's SAFSTOR program?**

Answer.

Yes. To date, all of the commercial nuclear power plants that are shut down and radiologically decommissioned have done so safely and in accordance with NRC requirements, regardless of the decommissioning strategy program initially employed. In all cases, the plants have been decommissioned, met the radiological requirements for unrestricted use, and the reactor licenses terminated or reduced to the on-site Interim Spent Fuel Storage Installation. Most of these sites used the DECON or prompt remediation approach. In DECON, the licensee starts decommissioning shortly after permanent shutdown by dismantling the structures, systems and components (SSCs) that contain radioactive contamination. These SSCs are removed from the site and safely disposed of at a commercially operated low-level waste disposal facility, and the remaining structures are decontaminated to a level that permits the site to be released for unrestricted use. For these plants, DECON was the preferred method due in part to the availability of low-level waste disposal sites to accept the radioactive waste.

Presently, there are 11 nuclear power plants in SAFSTOR, in which the plant is placed in a safe stable condition to allow future decommissioning. Eight of these plants are located at multi-unit sites that have operating nuclear power plants. Regardless of the decommissioning strategy chosen by the licensee, the NRC continues to inspect the plants to verify the site is maintained in a safe and secure condition.

b. **Have shortfalls in decommissioning funds created any legitimate safety issues at of these plants?**

Answer.

No. To date, the status of the decommissioning funds have not created any safety or security concerns at any of the 11 NRC-licensed decommissioned nuclear power plants. All nuclear power reactor licensees must provide decommissioning financial assurance. This financial assurance may be in the form of funds set aside by the licensee or a guarantee that funds will be available when needed. The minimum amount of financial assurance for reactors to radiologically decommission is defined in 10 CFR 50.75.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable Ed Whitfield

QUESTION 3. Since decommissioning plants don't pay as much in NRC fees as operating plants, how is the NRC going to handle the decrease in fees due to the increased numbers of reactors permanently shutting down?

Answer.

Annually, the NRC submits a budget request based on its anticipated workload in that year and receives an appropriation enacted by Congress that establishes the NRC's operating budget independent of agency fees. NRC's collection of fees is governed by two laws: the Independent Office Appropriations Act of 1952 (IOAA) and the Omnibus Budget Reconciliation Act of 1990 (OBRA-90), as amended. The IOAA requires NRC to recover its costs for services rendered to applicants and licensees which is accomplished through the collection of user fees (hourly fees) in accordance with 10 CFR Part 170. The OBRA-90, as amended, requires NRC to collect approximately 90 percent of its budget from user fees (hourly fees) and annual charges (annual fees) in the year appropriated, less amounts appropriated from the Nuclear Waste Fund, for Waste Incidental to Reprocessing, and for Generic Homeland Security activities. The NRC meets the requirements of OBRA-90, as amended, through the collection of hourly and annual fees assessed to licensees in accordance with 10 CFR Parts 170 and 171, respectively. The NRC fees for operating reactors are computed based on an established fee methodology published annually in the Federal Register with revisions to NRC fee regulations, 10 CFR Parts 170 and 171. With fewer operating reactors, the agency costs allocated to the operating reactor program would be distributed among fewer licensees, resulting in higher annual fees per licensee.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 1. Please provide a detailed schedule and estimates of the itemized cost for completing each of the individual SERs for the Yucca Mountain license application.

ANSWER.

In response to the Commission's August 30, 2013, Order seeking comment from the participants in the Yucca Mountain adjudication as to how the agency should continue with the licensing process, the staff estimated that, absent any unforeseen issues and with sufficient staff resources, it could complete and issue the remaining volumes of the Yucca Mountain Safety Evaluation Report (SER) approximately 12 months after initiating work. This estimate was based on inclusion of a start-up period to replace key technical reviewers who no longer work for the agency, to reassemble technical staff assigned to other tasks, and to enable reviewers to regain familiarity with licensing issues and docketed correspondence due to the break in the application review and the shift in staff focus to other agency activities.

In its November 18, 2013, Memorandum and Order, the Commission directed the staff to complete all remaining SER volumes concurrently, but issue each SER volume upon its completion. The Commission directed that the project be given a high priority so that appropriate technical staff and resources are available. The target to complete all volumes of the SER is January 2015, with an estimated cost of \$8.3 million. The NRC staff is moving forward with SER development.

We will provide additional details as they become available through our monthly reports.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

Question 2. The Commission's response to our November 21, 2013, letter stated that the staff would present a plan for implementing the Commission's decision to resume Yucca Mountain license review by the end of "this month" (December 2013). The Commission response also committed to keep the Committee fully and currently informed.

- a. If the staff has completed its plan, when will it be provided to the Committee?

ANSWER.

The Commission recently provided the plan to the Committee on Energy and Commerce (and others) as an attachment to the December 2013 monthly status report on the U.S. Nuclear Regulatory Commission activities and utilization of unobligated carryover funds appropriated from the Nuclear Waste Fund. A copy of the plan is included here as an attachment.

**PROJECT PLAN
YUCCA MOUNTAIN REVIEW ACTIVITIES
December 11, 2013**

Purpose

This project plan outlines how the U.S. Nuclear Regulatory Commission (NRC) staff will conduct and manage the completion of the NRC Safety Evaluation Report (SER) for the U.S. Department of Energy's (DOE's) license application (LA) for authorization to construct a geologic repository for high-level waste at Yucca Mountain, NV (i.e., NUREG publication).

Project Scope

Safety Evaluation: The SER includes a detailed technical review of the general information and the safety analysis report provided by DOE in its LA. The completion of the SER will serve as a basis for the final licensing decision. The current effort to complete the SER builds upon all previously completed technical analyses and modeling, requests for additional information (RAIs) and DOE's responses, published documents, and preparation of internal draft documents. Activities under this scope will end with completion and issuance of the final four remaining SER volumes (i.e., Volumes 2, 3, 4, 5). The duration of this activity is scheduled for approximately 12 months. Note that SER Volume 1 has already been published, and the staff does not foresee a need to revisit, edit, or supplement Volume 1.

Adjudicatory hearings/LSN: The adjudicatory hearings are not being restarted at this time. In addition, the Licensing Support Network (LSN) is also not being reconstituted at this time, but all documents will be promptly loaded as non-public documents into the Agencywide Documents Access and Management System (ADAMS), and all references used in the SER will be publicly available in ADAMS.

EIS supplement: The Commission has requested that DOE complete the Environmental Impact Statement (EIS) supplement. In response to the Commission's request, the NRC staff understands that DOE plans to prepare the EIS supplement, although the detailed approach and schedule need to be developed. Some NRC staff will be required to provide limited coordination and review of DOE's efforts for the EIS supplement and potential adoption determination. The staff has initiated outreach activities with DOE and is planning for a public meeting in the 2nd quarter of fiscal year (FY) 2014, to discuss DOE's plan for moving forward with development of the EIS supplement and the NRC staff's engagement during this development process.

Attachment

Organization

The primary organization within NRC that supports the completion of the SER is the Office of Nuclear Material Safety and Safeguards (NMSS), Division of Spent Fuel Alternative Strategies (SFAS). SFAS is assisted by several other Offices. In addition, the Center for Nuclear Waste Regulatory Analyses (CNWRA), a federally funded research and development center, provides technical support. The Secretary of the Commission and Office of Information Services (OIS) have primary responsibility to ensure that the LSN documents are loaded into ADAMS. In addition, a Yucca Mountain Core Group consisting of the lead organization (NMSS) and other internal stakeholders, such as SECY, Office of Congressional Affairs, Office of Commission Appellate Adjudication, Office of Public Affairs, Office of the General Counsel (OGC), Office of the Chief Financial Officer, OIS, Office of Nuclear Security and Incident Response, and the Atomic Safety and Licensing Board Panel will meet periodically to review the status of the Yucca Mountain activities.

Process, Roles, Responsibilities and Steps to Finalize the SER

This section provides guidance to the NRC and CNWRA staff to complete the review of the DOE LA for authorization to construct a repository at Yucca Mountain.

The roles, responsibilities, and process to complete SER Volume finalization are defined in the following steps:

1. Using previously completed work, the Yucca Mountain Team (YMT) will evaluate a document comparison between published Technical Evaluation Reports (TERs) and the last draft versions of each SER Volume. The YMT will decide whether to revise the TER into an SER or whether it is more efficient to incorporate the TER information into the existing draft SER Volume. For instance, the staff's last draft version of SER Volume 3 contains preliminary regulatory findings that were not included in the Postclosure TER. This draft SER Volume may not include all the technical support from the Postclosure TER. It may make more sense to incorporate the updated technical support information from the Postclosure TER into the draft SER Volume 3 rather than inserting all the findings from the SER back into the TER.

For SER Volume 2, the reverse may be true (i.e., it may be more appropriate to build upon the Preclosure TER, because the draft SER Volume 2 did not progress through the same level of review as was completed for the draft SER Volume 3). Therefore, it may be more efficient to move forward using a draft SER as the working file instead of a TER for one volume (i.e., SER Volume 3) and to use a TER as the working file instead of a draft SER file for a different volume. The YMT will review the documents to determine the most efficient and effective path forward for each volume. Furthermore, the staff will look for efficiencies as it works to complete the SER, such as assigning or reassigning

the most appropriate subject matter experts to support this effort, with due consideration of other high-priority agency activities.

2. All files used to develop the draft SER Volumes and associated TER Volumes have been retained and will be located on the CNWRA SharePoint site. Staff will use the CNWRA SharePoint site as the central file management system for completion of the SER. Depending on which option is selected in Step 1 above (i.e., start with last draft version of each SER Volume as the working file or start with the published TER Volume as the working file), the project manager (PM) (with assistance from CNWRA) will deconstruct the combined SER (or TER) volume file back to chapter level files. This will allow multiple reviewers to work simultaneously on each SER volume (at the chapter level) to incorporate changes, updates, and finalize each SER Volume's development. Note that staff will undertake original investigation or inquiry only as necessary to account or adjust for new information (*specific guidance being developed*).
3. Staff will adhere to the project management timelines and identify any issues that may impact schedule and quality to the cognizant Branch Chief for resolution, such as:
 - The most appropriate subject matter experts and other sufficiently qualified staff are not available at the appropriate time to develop the remaining SER Volumes concurrently.
 - There is a delay in the availability of the DOE LSN document collection or DOE is unable to provide the documents to staff in a timely manner.
 - Additional technical information is required from DOE to complete the SER, and DOE does not provide responses to new RAIs in a timely manner to support the NRC's schedule.
 - DOE is unable to complete the EIS supplement in a timely manner.
4. A Chapter Champion will be assigned as the lead author for each of the chapters contained in the four remaining SER volumes. The Chapter Champion consolidates, coordinates, and integrates input from technical reviewers into the development of the SER chapter; ensures that the regulatory bases and technical content provided by the technical reviewers are clearly articulated; and coordinates with other Chapter Champions to ensure the team's input is integrated into the SER. When the Chapter Champion indicates a chapter is ready for management and OGC review, the PM will move the designated chapter (file) into the OGC no legal objection (NLO) folder. Track changes will be made by both management and OGC. Staff will resolve

comments using track changes. Once all comments are resolved, the PM will accept changes, and write access will be restricted to technical staff at that time.

5. When the SER volume has been finalized (i.e. changes and updates have been made by staff, management and OGC review has been completed, and concurrence and OGC NLOs have been obtained) the NMSS Office Director will sign Form 426 authorizing publication of the SER Volume as a NUREG. The PM will coordinate with the Publication Branch, Office of Administration, to issue each SER Volume as a final NUREG.

Plan for Loading LSN Collection of Documents into ADAMS

OIS will create a new LSN library in ADAMS to house the LSN collections received by the Office of the Secretary on different types of media (external hard drives, compact disks, and digital versatile disks). During December 2013, OIS will acquire storage to house the new LSN library and 10 workstations to concurrently run multiple instances of a loader application being developed. The loader will add and profile the documents in the collections to the new LSN library. In early January, testing of the loading process after hours will commence and loading of the DOE collection will begin thereafter. The staff expects that experience in loading the documents during the first 2 weeks (approximately 70,000 documents per day) will be used to fine tune the approach and schedule. During February and March, loading of the collections from other parties will proceed in parallel with the DOE collection loading. In March, following completion of the loading of the DOE documents, OIS will begin configuration of user search interfaces and the building of search indexes. In late April and May, other parties' document loading and final testing and delivery will be completed. In parallel, OIS will configure the ADAMS Record Manager to automatically assign proper disposition and retention attributes to the documents in the LSN collections for compliance with the recordkeeping requirements.

Organization Structure for NMSS SFAS

As mentioned earlier, SFAS is the primary division within the NRC responsible for finalizing the Yucca Mountain SER. SFAS will be reorganized to accomplish the new work and be comprised of four branches. One of the four branches will continue to support existing ongoing SFAS work (including science technology, engineering, systems analysis, and related project management). The other three branches (Volume 2, Volume 3, and Volume 4/5/EIS) will be dedicated to supporting the finalization of the Yucca Mountain SER (Volumes 2, 3, 4, and 5) and review of the EIS supplement.

There will be three primary teams matrixed among the three Yucca Mountain branches that will support the finalization of the SER. The teams are outlined below:

Preclosure Team:

Primary responsibility: Finalize SER Volume 2

The Preclosure Team will consist of a Branch Chief (BC), one or two Senior Level Advisor(s) (SLs), a PM, a CNWRA volume PM, a Chapter Champion for each of the 10 chapters in SER Volume 2, and NRC/CNWRA technical and administrative support, as needed.

Postclosure Team:

Primary responsibility: Finalize SER Volume 3

The Postclosure Team will consist of a BC, an SER PM, a CNWRA Volume PM, a Chapter Champion for each of the 20 chapters in SER Volume 3, and NRC/CNWRA technical and administrative support, as needed.

Administrative and Programmatic Team:

Primary responsibilities: Finalize SER Volumes 4 and 5. Limited coordination and review will also be provided for DOE's development of the EIS supplement and potential adoption determination.

The Admin/Programmatic Team will consist of a BC, an SER PM (Volumes 4 and 5), an EIS PM, a CNWRA volume PM, a Chapter Champion for each of the 12 chapters in SER Volume 4 and one Chapter Champion for SER Volume 5, and NRC/CNWRA technical and administrative support, as needed.

Schedule

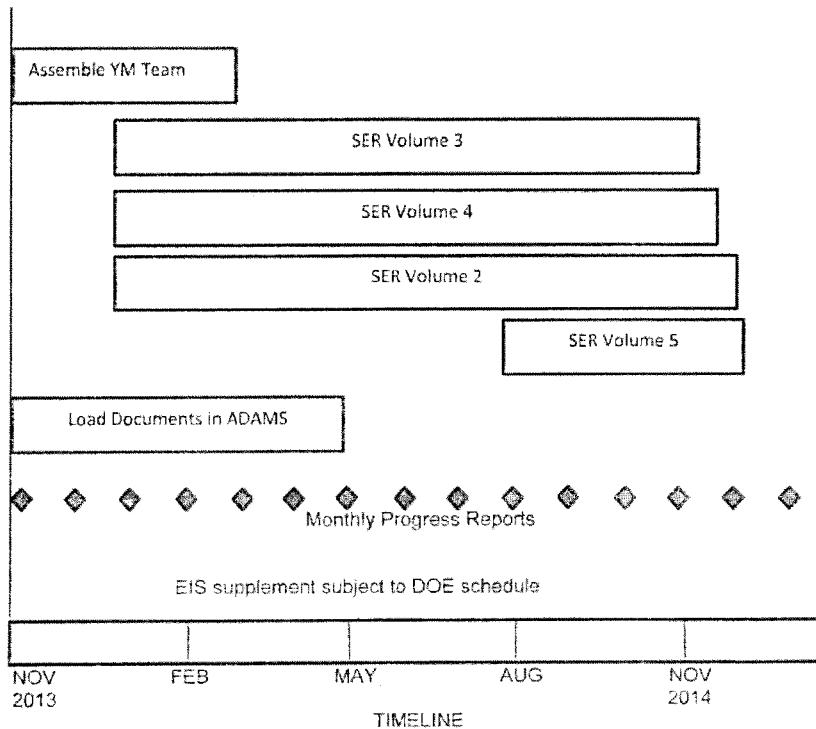
The staff estimates that with dedicated, focused effort, sufficient staff resources, and no unforeseen technical or process issues, all of the remaining volumes of the SER can be completed and issued within approximately 12 months after the staff initiates work. To complete and publish all remaining SER volumes within the 12-month schedule, the staff assumes that all volumes will be worked on concurrently and issued upon completion (i.e., if an SER Volume is completed earlier than the 12-month schedule, the staff will publish that volume before the other volumes are completed). The 12-month period includes time to establish the review teams for each volume, familiarize staff new to the project with the material, complete the volumes through concurrence, and issue them in final form.

The staff estimates it can reach an adoption decision within 3 months following receipt of the Final DOE EIS supplement. The 3-month timeframe is based on an assumption that staff is able to review a draft supplement issued earlier by DOE. DOE is in its early stage of assessing and planning the development of the EIS supplement. The staff assumes that the technical information on the supplement topics provided by DOE to staff in July 2009 will be a principal input to the supplement, and, following usual National Environmental Policy Act practices, a

draft EIS supplement would be issued for comment in advance of the final EIS supplement. Lastly, the staff has begun outreach activities by contacting DOE to plan for a public meeting in the 2nd quarter of fiscal year 2014 to understand DOE's intentions for completing the EIS supplement, consistent with Commission direction.

Below is a high-level summary representation of the interrelated schedule and approximate timelines to assemble the YMT, start and finish each SER Volume, load documents into ADAMS, and complete monthly progress reports for both the Commission and Congress. It also identifies a yet-to-be-determined timeline for DOE to start and finish the EIS supplement.

Yucca Mountain Schedule



Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 2 (Continued). The Commission's response to our Nov. 21, 2013 letter stated that the staff would present a plan for implementing the Commission's decision to resume the Yucca Mountain license review by the end of "this month" (December 2013). The Commission's response also committed to keep the Committee fully and currently informed.

b) If the staff has not completed its plan, why not and when will it be completed?

ANSWER.

The plan has been completed and provided to the Committee, as well as NRC's other oversight committees and subcommittees.

c) Will the staff's plan include estimates of the resources necessary to support a final Commission decision on the license application? If not, why not?

d) Does the staff's plan assume Congress will provide the resources necessary for the Commission to a final decision on the license application? If not, why not?

ANSWER.

The plan addresses completion of the SERs and EIS supplement and not the entire application. The writ of mandamus issued by the D.C. Circuit Court directed NRC to continue with the Yucca Mountain licensing process unless and until Congress authoritatively says otherwise or there are no appropriated funds remaining. When the decision granting the writ of mandamus was issued, the agency had approximately \$11 million in unobligated carryover funding appropriated from the Nuclear Waste Fund. The NRC staff has estimated that, absent any unforeseen issues, these resources are sufficient to complete the SER (estimated cost of completion: \$8.3 million) and an adoption determination review of a supplemental Environmental Impact Statement to be prepared by the Department of Energy. Further, the Licensing Support Network document collection currently in the Secretary of the Commission's possession can be loaded into the non-public portion of the NRC's Agencywide Documents Access and Management System for approximately \$700,000. We seek to maintain an adequate margin so as not to jeopardize our ability to complete these tasks, which constitute the next logical steps in the licensing process, and we will reevaluate our path forward not to resume the adjudication in the event that circumstances materially change. In the time since the Commission Order on November 18, 2013, an additional \$2.2 million was deobligated from previous obligations. On January 24, 2014, the Commission provided further direction on the use of the deobligated funds to enable public access to the Licensing Support Network documents after the staff has collected three months of additional data on actual project expenditures to ensure sufficient funds exist to complete and issue all volumes of the SER and of the supplemental Environmental Impact Statement (EIS).

Following issuance of the SER and an adoption determination of the supplemental EIS, a number of licensing steps remain to reach a decision regarding construction authorization for a

repository at Yucca Mountain. This includes completion of the adjudicatory hearings, which currently include 15 parties and nearly 300 admitted contentions.

e) Please provide detailed schedule and resource estimates to support the following actions:

i) Complete and publish each individual volume of the Safety Evaluation Report;

ANSWER.

The NRC staff has estimated that it can complete and issue the remaining volumes of the Yucca Mountain SER approximately 12 months after initiating work. In accordance with Commission direction, staff will issue each SER volume upon its completion. The staff's estimate for completing the SER identified that approximately \$8.3 million would be needed to complete the SER. More information will be provided in the NRC's monthly reports.

ii) Complete the hearing process and adjudication of contentions;

iii) Render a final decision on the issuance of a construction authorization.

ANSWER.

ii) A schedule for the high-level waste proceeding is set forth in 10 CFR Part 2, Appendix D. Appendix D contemplates that the adjudicatory proceeding would be completed after a Commission decision on any appeal from an initial Board decision on contested matters. The schedule also contemplates that discovery would proceed in parallel with the staff's development of the Safety Evaluation Report. As described in the Commission's November 18, 2013, order, the Commission's 2011 decision suspending the proceeding effectively tolled the Appendix D schedule and the November 18 order resulted in a further deviation from that schedule, in that discovery would not occur in parallel with completion of the Safety Evaluation Report. If the adjudicatory proceeding resumes, there will likely need to be additional deviations from the Appendix D schedule. For FY 2010, prior to the suspension of the proceeding, the NRC requested \$56.0 million to support its licensing and hearing-related activities. See Performance Budget Fiscal Year 2010, NUREG-1100, Volume 25 (May 2009). Completion of the adjudicatory process would be a multi-year effort. Resource estimates to resume and complete the proceeding under current circumstances, which would include any additional costs for restart activities, would need to be evaluated and the Commission would take appropriate action in the course of the agency's budget development process.

iii) As noted above in response to question 2.e.ii, a schedule for the high-level waste proceeding is set forth in 10 CFR Part 2, Appendix D. This schedule includes milestones for any decision regarding issuance of a construction authorization. Resource estimates to reach this milestone under current circumstances, which would include any additional costs for restart activities, would need to be evaluated and the Commission would take appropriate action in the course of the agency's budget development process.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 3. Has the NRC contacted the Office of Management and Budget regarding the need to fund the Yucca Mountain license review? If not, why not?

ANSWER.

No. The D.C. Circuit Court of Appeals mandamus order does not include a requirement for the Commission to request additional funds. The Commission's focus has been on how to spend the available funds as ordered by the court. Any future decision to seek additional funding would be made by the Commission as a collegial body.

- a. If so, please describe OMB's response.

ANSWER.

Not applicable.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 4. There have been repeated statements about the need to reconstitute the staff necessary to resume review of DOE's Yucca Mountain license application. Has the staff been reconstituted?

- a) Please provide a list of staff needed for the team and describe the types of positions and areas of expertise.
- b) How many positions remain unfilled at this time and when will they be filled?
- c) Of the staff that have been assigned to the license review, please indicate how many have previous experience working on the Yucca Mountain license review and the length of that experience.

ANSWER.

In response to a Question for the Record from the House Committee on Energy and Commerce, Subcommittee on Environment and the Economy hearing held on September 10, 2013, the staff provided a list of the type of expertise needed to review the DOE's Yucca Mountain license application. The information contained in that response is still valid and provides a roadmap for how the staff has been reconstituting the Yucca team. Of the 40 NRC positions identified to work on the SER and supplemental EIS, one position remains to be filled. The position will be filled in the next few weeks. Most positions were assigned in December, following the Commission's Memorandum and Order defining the tasks. Of the remaining positions, five more were assigned in January, and four more in February. In addition, staff are fully supported by the Center for Nuclear Waste Regulatory Analyses, the NRC's Federally-Funded Research and Development Center. Almost all of the staff assigned have previous experience on the Yucca Mountain license review, ranging from several years to multiple decades.

Attachment 1 – Additional Questions for the Record
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QUESTION 5. In our September 10th hearing with Chairman Macfarlane, Chairman Murphy noted that the NRC had spent Nuclear Waste Fund \$9.4 million to terminate the Yucca Mountain license review, money which had been appropriated to fund the license review. This has resulted in a fundamental injustice to the electricity consumers who paid for the NRC to scuttle the license review which the DC Circuit Court as a legal obligation.

- a. Has the Commission considered restoring the funds that were inappropriately used to terminate the Yucca licensing process? If not, why not?
- b. When will the NRC make a decision on this matter?
- c. Has the Commission considered referring this matter to the Office of the Inspector General?

ANSWER.

- a. The NRC expended NWF resources in accordance with the appropriations of Congress and its role under the NWPA. However, in our November 18, 2013 Order, we responded to various parties' assertions that non-Nuclear Waste Fund funds should be used for activities associated with resumption of the licensing process. As we explained in our November 18, 2013 Order, the Commission has determined that it lacks legal authority to use non-Nuclear Waste Fund funds for activities in connection with the licensing process, including using non-Nuclear Waste Funds to "restore" prior Nuclear Waste Fund appropriations.
- b. See answer to Question 5a above.
- c. No.

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QUESTION 6. If the Yucca Mountain licensing process was completed and the Commission issued a license, would that support an affirmative Waste Confidence determination?

ANSWER.

Even if the NRC were to issue a license authorizing construction of a repository at Yucca Mountain, this does not guarantee that the repository would be constructed, or that it would be licensed to operate.

Issuance of a license to construct and operate a high-level radioactive waste geologic repository would provide additional support for numerous assumptions and analyses concerning the safe storage of spent nuclear fuel that are in the current draft Waste Confidence Generic Environmental Impact Statement. The draft Generic Environmental Impact Statement addresses the environmental impacts of continuing to store spent fuel at a reactor site or an away-from-reactor storage facility, after the end of a reactor's licensed life for operations until final disposition in a geologic repository. The draft Generic Environmental Impact Statement concludes that the environmental impacts of continued storage can be analyzed generically and provides the regulatory basis for the proposed Waste Confidence rule. The proposed Waste Confidence rule adopts (codifies) this generic analysis of environmental impacts for continued storage of spent fuel.

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QUESTION 7. In our Sept. 10th hearing, I reviewed how Volume 3 of the Safety Evaluation Report was "substantially complete" when the license review was terminated. What is the earliest date that Volume 3 of the SER will be released?

ANSWER.

The staff's current plan for completion of the SER estimates that Volume 3 of the SER will be released in December 2014, given a dedicated, focused effort, sufficient resources, and no unforeseen technical or process issues.

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QUESTION 8. The Nuclear Waste Policy Act provided the NRC 3 years to review and issue a final decision on a repository license application. Yet, the NRC staff has estimated that 12 months would be necessary to complete the remaining volumes of the SER and the Commission endorsed this estimate in its November 18, 2013, order. How can you justify allowing 1/3 of that time to finalize SERs that were nearly complete over 2 years ago?

a. When will the clock actually start ticking on that 12 months?

ANSWER.

The recommencement of our licensing review necessitates additional time to assemble a review team capable of producing a high-quality SER. The plan is to complete all four volumes of the SER by January 2015. The staff's twelve-month schedule began with the start of their full-scale technical review in January 2014.

Consistent with existing agency requirements and guidance, the projected timeframe will provide the staff time to complete its review addressing all applicable regulatory requirements, with its analysis and conclusions documented in the SER, in order to support the staff's technical and legal findings in any potential adjudicatory proceeding. The review includes time for the staff to re-familiarize themselves with the substantial amount of previously developed material and consider any new and significant information.

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QUESTION 9. What actions is the Commission taking to ensure strict scrutiny and accountability for Nuclear Waste Fund expenditures?

ANSWER.

In a November 18, 2013, Staff Requirements Memorandum (SRM), the Commission directed the NRC Chief Financial Officer to provide monthly reports on Nuclear Waste Fund expenditures. The Commission also requested immediate notification if at any point the staff becomes concerned that any part of the Commission's direction will not be able to be implemented with the available Nuclear Waste Fund resources. In its January 24, 2014, SRM, the Commission reiterated that it will continue to closely monitor Nuclear Waste Fund expenditures to ensure effective implementation of Commission direction and the prudent use of funds, including quarterly briefings to Commission staff in order to provide detailed information on progress towards completion, the pace of expenditure of funds, and issues that arise in the course of the project.

NRC's appropriations from the Nuclear Waste Fund were provided specifically for the purpose of funding the agency's responsibilities under the Nuclear Waste Policy Act of 1982, as amended. Federal appropriations law requires agencies to apply appropriations "only to the objects for which the appropriations were made," 31 U.S.C. § 1301(a). Therefore, the NRC has always tracked and controlled Nuclear Waste Fund resources separately from its other appropriated funds. Allocation, obligation, and expenditure of NRC's Nuclear Waste Fund resources are accounted for within NRC's administrative control of funds process. Further, NRC internal management directives require strict financial controls over the charging of costs to Nuclear Waste Fund resources.

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QUESTION 10. From the beginning of August to the time of the hearing, the Commission has conducted three meetings to discuss management and personnel issues, one briefing on NRC's construction activities, one briefing on international activities, and four vote affirmation sessions. However, on January 6, the Commission held a briefing on Spent Fuel Pool Safety and Consideration of Expedited Transfer of Spent Fuel to Dry Casks.

a. Why did the Commission spend time meeting on an issue with such low safety significance and for which the NRC staff recommended no further regulatory action?

ANSWER.

After the Fukushima Dai-ichi accident, the Commission began holding meetings on the status of progress on NRC actions in response to the accident. Those meetings have addressed, for example, filtered vents, agency consideration of economic consequences of accidents, and spent fuel pool safety and consideration of expedited transfer of spent fuel to dry casks. Spent fuel storage issues are of considerable interest to both the Commission and the public.

b. Which commissioner requested the Commission briefing on the expedited transfer of spent fuel?

ANSWER.

Commissioner Magwood in a memorandum to the Commission dated August 27, 2012, requested a meeting to review historical studies and analyses underlying NRC's current regulations, learnings thus far from Fukushima, and to update the Commission on recent studies conducted by the staff. The Commission agreed that a broad meeting on the topic should be considered. Subsequently, the Chairman proposed a specific meeting on the Safety of Spent Fuel Pools and Consideration of Expedited Transfer. The Commission approved the meeting.

c. How does the Commission set its priorities and decide which issues warrant a meeting?

ANSWER.

In accordance with the Internal Commission Procedures, Chapter IV – Commission Meetings/Hearings, the Office of the Secretary (SECY) prepares recommendations for the Chairman's consideration after receiving input from numerous NRC offices, requests from other Federal agencies and other outside entities, and requests from individual Commissioners. The Secretary of the Commission meets at pre-agenda sessions with the Chairman and representatives of the Office of General Counsel and Office of the Executive Director for Operations. The results of the pre-agenda meeting form the basis for the Chairman's recommendations to the other Commissioners of a proposed agenda.

The purpose of the Agenda Planning Session, presided over by the Chairman and typically held monthly, is for the Commission to review, discuss, and approve the proposed meeting schedule, as well as any other agenda-related matters that the Chairman or individual Commissioners

wish to address. At agenda planning sessions, Commissioners can propose additional meeting topics. In recognition of the collegial process, an individual Commissioner's request that a meeting be scheduled, and a proposed scheduling note subsequently be prepared for approval by the Commission, will be granted unless a majority of the Commission disapproves the request.

d. What role does safety significance play in scheduling Commission meetings?

ANSWER.

Safety significance is a consideration in determining topics for Commission meetings. The Commission also considers events, such as the Fukushima Dai-ichi accident. The meeting on spent fuel pool safety and consideration of expedited transfer of spent fuel to dry casks was an outgrowth of actions in response to the Fukushima Dai-ichi accident.

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The Honorable John Shimkus

QUESTION 11. At the 12/12/13 hearing it was evident that the Commission had not deliberated on or come to any Commission position on H.R. 3132 or any elements of this. Is this correct?

- a. If so, have you since begun to formulate a Commission position on H.R. 3132, especially in light of several Commissioner statements indicating that elements of the Bill can be helpful?
- b. If not, when will such deliberations be scheduled?

ANSWER.

The Commission has not been asked for its collegial views on H.R. 3132 and therefore has not deliberated or come to a Commission position on the bill or any of its provisions. Individual Commissioner perspectives are being provided in response to Questions for the Record from the December 12, 2013, hearing.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 12. As part of the NRC's effort to improve the accuracy of its cost estimates, is the NRC staff reviewing whether more accurate cost estimates might have altered the cost justification for previous regulatory actions? If not, why not?

ANSWER.

The staff is currently reviewing cost estimates for some previous rules under the Cumulative Effects of Regulation (CER) case studies to address Commission direction provided in SECY-11-0032, "Consideration of the Cumulative Effects of Regulation in the Rulemaking Process" (NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML13071A635). This review is being performed in concert with industry to understand the costs incurred by industry in implementing these rules, to provide insight regarding the accuracy of the NRC's cost estimates, and to identify lessons learned for further improving regulatory analysis estimates. For rules that are necessary for adequate protection of public health and safety, that level of protection must be assured without regard to cost. For rules that are not necessary for adequate protection, the rule must provide substantial benefit and the expected benefits should outweigh the costs. The purpose of the CER case studies is to gather lessons learned that could further improve future regulatory analyses and not produce after-the-fact rationalizations to justify decisions already made. The NRC believes that decisions to promulgate existing rules, which included opportunities for the public to comment on NRC cost estimates, were based on adequate information regarding the values and impacts and followed a systematic and disciplined process that was open and transparent in arriving at those decisions.

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The Honorable John Shimkus

QUESTION 13. The NRC is entering a multi-year study on radiation impacts around nuclear power plants using the National Academy of Sciences. Please explain the reasons for undertaking this study.

ANSWER.

Each commercial nuclear power plant and fuel cycle facility that the NRC regulates is authorized to release small amounts of radioactive materials to the environment as specified in the regulations and licensing documents. The NRC's regulations include dose limits for members of the public and concentration limits for liquid and gaseous effluent releases, which licensees must also meet. NRC regulations and licenses require each licensee to establish and maintain a program for monitoring radioactive effluents. NRC regulations require licensees to measure and report these effluents from their facilities. The staff has concluded from reviewing reports from both nuclear power plants and fuel cycle facilities that offsite doses to individual members of the public are a small fraction of the annual radiation dose limits. The offsite dose from an NRC regulated facility to the postulated highest exposed member of the public is generally less than 1 percent of the amount of radiation that the average U.S. citizen receives in a year from all background sources in the environment, such as naturally occurring radioactive materials in soil and rocks and radon in the air. Nonetheless, some stakeholders have expressed recurrent concerns about the potential effect of these releases on the health of residents living near nuclear facilities.

To help address these stakeholder concerns, the staff uses the 1990 National Cancer Institute (NCI) report and other more recent epidemiology reports conducted by various State Health Departments when responding to questions regarding incidences of cancer in populations near nuclear power facilities. The staff relies on credible health studies to augment its discussions about the NRC's robust regulatory programs to keep offsite doses as low as is reasonably achievable (ALARA) by providing public health information that directly applies to the health outcomes that are often of concern (i.e., cancer). However, the 1990 NCI report is now more than 20 years old, and more modern analysis methods, combined with up-to-date information sources, will provide contemporary cancer information in current populations living near NRC-licensed nuclear facilities. As a result, the NRC decided to update the NCI study. Studies of this nature are not new or unique to the United States. Since 2008, Canada, France, Germany, Great Britain, Spain, and Switzerland have all conducted epidemiology studies of populations near nuclear facilities within their borders to address public health concerns.

- a. Please describe any deficiencies in current scientific information concerning the radiation risks surrounding nuclear power plants that warrant this study.

ANSWER.

The reason for this study is to provide the latest health information to the general public on cancer risks in populations around NRC-licensed nuclear facilities using more modern analyses methods and up-to-date information sources. The NRC staff realizes off-site radiation doses from licensed facilities are very low and uncertainties in the current scientific understanding of radiation risk at low doses are unlikely to be addressed by this study. However, the staff also realizes that health studies can provide useful information and augment staff discussions when

addressing recurrent health risk concerns from the public. For example, the 1990 NCI study that NRC has asked the National Academy of Sciences (NAS) to update has proven to be a useful resource for staff to reference when discussing cancer risks with the public. In addition, the NAS Phase 1 report confirmed the staff position that, at the low offsite doses from these facilities, researchers would not expect to observe any increased cancer risks in the populations surrounding these facilities attributed to the regulated release of radioactive effluents. Nevertheless, the staff believes that despite these potential limitations and expected outcomes, the studies would be helpful to address public health concerns and are, therefore, still worthwhile to pursue. As recent international studies indicate, epidemiology studies can be an important tool for addressing public health concerns, even with these known limitations.

- b. There have been a number of recent studies published on this topic of nuclear power and radiation risk. One in particular is the May 2013 Canadian Nuclear Safety Commission report, which studied children who lived around three nuclear power plants spanning 1990 to 2008. Like other reports, this recent Canadian study concluded there is no extra cancer risk for children living near a nuclear power plant. Do you know if this report has been reviewed by the NRC?**

ANSWER.

Yes, the NRC staff has reviewed this report as well as other recent international studies. The staff has also shared these reports with the NAS study staff.

- c. Please provide information on how much has been spent (on) the previous phases in the NAS study and how much the remaining phases are estimated to cost.**

ANSWER.

NAS has taken a two-phase approach to the study. The cost of Phase 1, which explored the feasibility of conducting an updated study using modern analytical methods, was \$1,036,653. The committee identified two scientifically sound approaches for carrying out the assessment of cancer risks in populations near U.S. nuclear facilities. The Phase 1 report also recommended a pilot study involving seven nuclear facilities to assess the practical implementation of the recommended approaches. The current Pilot Study Planning Phase budget is \$564,600. An additional \$900,000 has been estimated for the Pilot Study Execution Phase. After the pilot studies, the NRC staff intends to determine whether the recommended study designs can be performed on the remaining facilities at a reasonable cost and effort, whether they provide useful information to discuss public health concerns with NRC stakeholders, and if the agency should proceed with Phase 2, which would be to perform an assessment of cancer risks at all NRC-licensed facilities. However, we do not have an estimate of what the remainder of the Phase 2 study would cost at this time.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 14. The Commission's response to our November 21st letter indicates that Fukushima-related activity has affected other agency regulatory work including new plant reviews, license renewals, and power uprate requests. How many standard NRC regulatory actions and reviews have been delayed because of Fukushima-related work?

ANSWER.

With respect to new reactor reviews, for Commission-approved Fukushima recommendations, the NRC staff requested that the combined license and design certification applicants provide the information required by the orders and the 50.54(f) letters described in SECY-12-0025. Completion of the necessary analyses in response to new seismic data and mitigation strategies for extended station blackout stemming from Fukushima recommendations have added to the scope of the reviews, and in some cases, these analyses have affected the ability of the applicants to meet review schedules. In addition, resources from certain select technical disciplines such as hydrology and seismology were diverted to support resolution of Fukushima lessons learned issues for the operating fleet and this impacted the pace at which resources were available to resolve new reactor application issues. However, in most cases, the issues resulting from Fukushima lessons learned are not critical path in completing the new reactor design certification and combined license reviews, and have, therefore, not affected the review schedules. In addition, none of these activities have impacted the construction schedule for Vogtle Units 3&4, and VC Summer Units 2&3.

With respect to operating reactors (including power uprates), the increase in work related to Fukushima is causing our review of licensing actions and other licensing tasks to take longer to complete. Before the work for Fukushima came in, licensing actions and other licensing tasks were usually closed on average within 7 months. By the end of 2013, they were taking on average 9 months to close, and that time is increasing.

With respect to license renewals, there have been no delays. There have only been minor staffing and resource impacts related to Fukushima in license renewal; none of which resulted in a delay to the overall schedule of license renewal activities."

a. Is it correct that NRC continues to operate the Japan Lessons-Learned Directorate separate from its line organization?

ANSWER.

The Japan Lessons-Learned Project Directorate (JLD) is integrated as an organizational unit within the NRC's Office of Nuclear Reactor Regulation. To oversee the prioritization and implementation of the Fukushima lessons learned, the Commission chartered the NRC's Japan Lessons Learned Steering Committee. As part of that charter, the JLD was established to coordinate activities and communications related to the NRC's response to the accident. The JLD organization and the Office of Nuclear Reactor Regulation coordinates with other NRC Offices to ensure the appropriate prioritization of activities, both among the Fukushima items and between the Fukushima items and other NRC activities.

b. Having addressed the most safety-significant post-Fukushima changes, isn't it time the NRC returned to regular order?

ANSWER.

Recent Commission direction to the NRC staff to continue coordination and reporting activities through the implementation of the highest priority post-Fukushima actions will require continued dedication and focus by the staff to ensure the successful and timely completion of these activities. However, the post-Fukushima activities are increasingly being incorporated into the normal agency planning, budgeting, and performance monitoring activities. In addition, many of the specific activities arising from the identification of lessons learned from the Fukushima accident are being managed and implemented by the line organizations that existed before the accident without routine oversight by the Steering Committee. The Japan Lessons Learned Project Directorate will continue to ensure appropriate coordination is continued within the agency, with the nuclear industry, and with other stakeholders until the highest priority activities are implemented and the desired safety outcomes have been achieved.

- c. Would you each please tell me your views on the benefits of transferring any further Fukushima regulatory activity into the normal regulatory decision-making processes of the agency-returning staff to their regular positions – so that the agency can perform its regulatory activity in an integrated, efficient fashion?

ANSWER.

As discussed in response to question "b" above, the NRC is routinely evaluating its programs and activities to achieve successful implementation of the Fukushima lessons-learned activities while also meeting other parts of the agency's performance goals. The Fukushima-related activities have been increasingly re-incorporated into the NRC's normal planning, budgeting, and performance monitoring programs and prioritized along with other agency programs. The Commission, as a body, views the continued oversight by the Japan Lessons Learned Steering Committee, which comprise senior managers from various offices, and coordination by the Japan Lessons-Learned Project Directorate, as the best way to ensure safety improvements are evaluated and, where appropriate, implemented in an integrated and efficient manner.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 15. What is the Commission doing to ensure that the cyber security rules are risk informed and are not applied to non-safety related equipment?

ANSWER.

In March 2009, the NRC issued Title 10 of the *Code of Federal Regulations* 73.54, "Protection of Digital Computer and Communication Systems and Networks." This cyber security rule is risk-informed and performance-based, requiring licensees to analyze, identify, and adequately protect digital assets associated with safety-related, important-to-safety, security, and emergency preparedness functions and support systems. Thus, although the scope of the rule is not limited to safety-related equipment, the cyber security rule does not apply to digital assets that the licensee determines have no potential to adversely impact safety, security, or emergency preparedness functions or support systems associated with those functions. The Commission has developed an associated regulatory guide that licensees may use to facilitate their understanding and implementation of the regulatory requirements. Licensee efforts are subject to inspection and verification by the NRC.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Ed Whitfield

QUESTION 1. According to the NRC staff's FY 2012 report on adverse trends in the industry's safety performance: "*... the staff identified no statistically significant adverse trends in industry safety performance.*" In fact, a closer inspection of the long-term trend graphs in that report show that the industry is improving safety in 10 out of the 14 graphs. The staff indicated the remaining four: "*... did not have a statistically significant trend.*" However, the nuclear reactor safety budget has grown 48% over the last ten years even though the number of licensing actions and tasks has decreased 40%. Four reactors permanently shut down last year, another one will this year, and reports persist that others may also.

- a. Please describe what actions you believe the Commission should take to ensure the budget is commensurate with a decreased workload, a shrinking fleet, and improving industry safety performance.

ANSWER.

The Commission will continue to oversee the agency budget formulation and execution processes to ensure resource requests are commensurate with workload. This includes overseeing the annual budget formulation process of developing a two year projected workload in the Nuclear Reactor Safety and Nuclear Materials and Waste Safety Programs, including the anticipated number of licensees and the number and complexity of anticipated license applications. On an annual basis, the Commission oversees the review of the baseline budget and adjusts resource allocations based on several factors, including letters of intent from current and prospective licensees, changes in regulatory requirements, and prior year expenditures. The year prior to executing the budget, the Commission oversees the review of requested resources and associated workload that was previously requested and adjusts them based on the most current information. Lastly, in the year of budget execution, the agency adjusts resources commensurate with the level of work actually received. The most recent budget that was formulated (FY2015) is based on current assumptions regarding the projected workload for FY2014. The agency will begin to develop the FY2016 budget in the coming months using updated assumptions about operating plants, COL applications, and other indicators of the projected workload.

As of November 16, 2013, the NRC has 3871 staff, including the Office of the Inspector General, which is down 368 employees from FY2010. The NRC has actively engaged in efforts to streamline the organization. For example, the NRC initiated efforts to reduce its overhead by centralizing and consolidating corporate support functions through its Transforming Assets into Business Solutions (TABS) initiative. This effort has resulted in a reduction of Office Support FTE of 273 (25%) from FY2011 to FY2015.

If you can provide a more specific citation for the numbers used above, I would be happy to address them in more detail.

- b. Please describe any recommendations you believe would improve the prioritization and application of resources to matters that are safety significant.

ANSWER.

Over the last few years, the agency has made improvements to our budgeting processes. Most recently, the NRC adopted a baseline budgeting approach for the development of the FY2015 budget. The approach uses information on the execution of resources from the prior year as a starting point for developing the resource request, then takes into account known "fact-of-life" changes in workload as well as the Commission's planning objectives for budget development and prioritization of planned activities to ensure prioritization and application of resources to matters that are safety significant. Further, during the budget process, the Commission ensures that adequate resources are requested to achieve the safety and security goals and objectives as described in the agency Strategic Plan. As stated in response to part (a) of this question, with the oversight of the Commission, the agency should continue its annual budget formulation and execution processes to ensure the most effective and efficient application of resources.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 1. Given the DC Circuit Court of Appeals reaffirmed the NRC's obligation under the Nuclear Waste Policy Act to review the Yucca Mountain license application, do you as an individual commissioner believe it is incumbent upon the NRC to request the funding necessary to complete the license review?

ANSWER.

We do not understand the court's decision or any other legal authority to require us to request additional funding from the Nuclear Waste Fund.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 2. Do you as an individual commissioner believe the NRC should propose a supplemental budget request to the Office of Management and Budget to support full resumption of the license review? If not, why not.

ANSWER.

I do not believe that NRC should propose a supplemental budget request to OMB to support full resumption of the license application. We are currently upholding our legal obligations under both the Nuclear Waste Policy Act and the writ of mandamus issued by the U.S. Court of Appeals for the D.C. Circuit and using previously appropriated Nuclear Waste Fund money to complete the license application review process. The court gave the NRC broad discretion to choose a pragmatic course of action to resume the Yucca Mountain licensing process, and we chose an incremental approach that is both constructive and consistent with the writ and the resources available. We are using available funding to complete the Safety Evaluation Report (SER), the Environmental Impact Statement (EIS) supplement and make the Licensing Support Network (LSN) documents publicly available.

I believe that the Commission rightly decided to defer resumption of the adjudicatory proceeding and reconstitution of the LSN. The Commission should consider the reconstitution of the LSN in the context of the hearings it would be needed to support, not in a piecemeal manner. Neither the SER or the EIS supplement is complete and we still lack an applicant with sufficient resources to participate in the licensing process, conduct discovery, and defend its application in the required adjudicatory hearings. No amount of resources will enable the NRC to conduct any type of meaningful review of the licensing application in the absence of an applicant with sufficient funding to participate in the process and defend its application. I would also note that Congress once again passed an appropriations bill that included no money for either the NRC or DOE to conduct activities related to Yucca Mountain. For these reasons, and in consideration of the current budget environment, I do not believe it is wise for NRC to request money we do not currently need.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 3. If the Commission fails to request funding for completing the Yucca Mountain licensing process, do you as an individual commissioner believe that would weaken the basis for Waste Confidence findings?

ANSWER.

No. The “waste confidence” rulemaking that the Commission is undertaking right now seeks to adopt the Commission’s generic assessment of the environmental impact of several scenarios, including the need for continued storage of spent fuel at reactor sites for an indefinite period of time due to continued uncertainty concerning the licensing and construction of a repository. Although the Commission is currently considering comments it has received on the generic environmental impact statement (GEIS) that it has prepared, it is confident not only that it is technologically feasible to license and construct a repository, but also that the final GEIS will adequately address the impacts of continued storage under several scenarios, without regard to whether additional funds are sought for the Yucca Mountain licensing process.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 4. Given the fact that the NRC routinely issues draft SERs during other license reviews and later revises them, do you as an individual commissioner believe the Commission should utilize the same approach on the Yucca Mountain license review for the sake of transparency? If not, why not?

ANSWER.

It is not the NRC's practice to issue "draft" safety evaluation reports (SERs). The NRC issues SERs with open items for some licensing actions, but there is no statutory or regulatory requirement to issue an SER with open items in the Yucca Mountain proceeding or any other proceeding. An SER with open items is final on all matters except those designated as "open items," and receives the same level of management and legal review as an SER with no open items. Once open items are closed, a complete SER is issued. For other licensing actions, the NRC issues chapters of the SER as they are completed. With respect to the SER for the Yucca Mountain license review, in our November 18, 2013 Order, we directed the staff to work on the remaining four volumes of the SER (volumes 2-5) concurrently but issue each volume upon completion. As stated in the November 18, 2013 Order, we believe that release of completed volumes serially provides adequate transparency of the staff's work.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 5. Recently, the NRC staff provided a 400-page report to the Commission: "*Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark 1 Boiling Water Reactor.*" The cover memo for that report states:

"This study shows the likelihood of a radiological release from the spent fuel after the analyzed severe earthquake at the reference plant to be very low (about 1 time in 10 million years or lower)."

The staff has provided the Commission with a 200-page report entitled "Staff Evaluation and Recommendation for Japan Lessons-Learned Tier 3 Issue on Expedited Transfer of Spent Fuel". In this report, the staff concluded that:

"The costs of expedited transfer of spent fuel to dry cask storage outweigh the benefits";

"Additional studies are not needed"; and

"No further regulatory action is recommended for the resolution of this issue and this Tier 3 item should be closed".

- a. As an individual commissioner, do you have any reason to doubt the NRC staff's competence in this regard?

ANSWER.

Our experts at the Nuclear Regulatory Commission are highly competent. The consequence study and the staff recommendation on expedited transfer is a policy matter before the Commission for consideration.

- b. Chairman Macfarlane, you coauthored a study in 2003 on this very topic and reached a different conclusion: "Our central proposal is to move spent fuel into dry casks after it has cooled for 5 years." Do you stand by your earlier proposal or do you agree with the NRC staff?

ANSWER.

The consequence study and staff recommendation on expedited transfer is a policy matter before the Commission for consideration. I am rigorously reviewing the technical analysis, regulatory analysis, and policy information that has been developed by NRC staff since 2003, as well as other information and analysis in the peer-reviewed literature since 2003 as well as input from the public and other interested parties.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Joe Barton

QUESTION 1. In November 2013, NRC released a report entitled “A comparison of U.S. and Japanese regulatory requirements in effect at the time of the Fukushima accident.”

- a. Do you support all of the findings of the staff report?
- b. The authors of the report acknowledge that the staff’s comparison was not an exhaustive review. Do you think it is appropriate for the Commission to consider revising the NRC’s regulatory framework without having an exhaustive review as a solid basis for such a revision?
- c. What differences between U.S. and Japanese regulatory framework were left out of the final report? Why were they not deemed to merit further analysis?

ANSWER.

With regard to the comparison of U.S. and Japanese regulatory requirements that were in effect at the time of the Fukushima Dai-ichi accident in March 2011, I support all of the staff’s findings. The NRC staff’s comparison, which was performed with contractor support, focused on the issues that were especially important to the Fukushima event, including: protection from design basis natural phenomena such as earthquakes, tsunami, and floods; loss of ultimate heat sink; loss of electrical power; containment venting; and severe accident management.

The staff found that the U.S. and Japanese had many similarities in design bases requirements and guidance at the time of the event. There were also differences between the U.S. and Japan in the preparation for and response to beyond design bases events and severe accidents. However, the staff’s comparison should not be construed as implying that the Fukushima accident and associated consequences could or would have been completely avoided assuming Japan had the same U.S. regulatory framework prior to the accident. In addition, even though the report identified some differences, it concluded that a Fukushima-type accident could occur in the United States.

It should be noted that the staff’s study was performed to evaluate the similarities and differences between the U.S. and Japanese regulatory requirements that were in effect at the time of the accident at Fukushima Daiichi. Since that time, Japan has re-organized the nuclear regulatory body and developed many new safety standards and regulations to improve regulatory oversight of its nuclear power plants. The NRC has also imposed additional requirements and undertaken numerous activities to address the lessons learned from the accident.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 1. Did you inform your fellow commissioners of your intention to declare your opposition to H.R. 3132 prior to this hearing?

ANSWER.

I discussed my reservations about H.R. 3132 with Commissioner Apostolakis and Commissioner Ostendorff. I may also have discussed the bill with Commissioners Magwood and Svinicki, but I do not specifically recall doing so.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 2. Did you make any attempt to convey your concerns to either my personal staff or staff for the Committee Majority or Minority prior to this hearing?

ANSWER.

As I have expressed consistently when appearing before you and your colleagues on the Committee, I want to look forward – not backward - at the NRC and intend to fulfill my duties as Chairman in a collegial manner such that a number of the bill's provisions would not be necessary. I trust that you agree that I have conducted myself in this manner. Additionally, our Office of Congressional Affairs and Office of General Counsel provided staff-level technical assistance and feedback on the bill to your personal staff and Committee staff both in the drafting stages and before the hearing. These discussions included the potential unintended consequences and constraints upon an NRC Chairman's actions during an emergency response given provisions of the bill as introduced. Following the hearing, I also met with you on January 9, 2014, to discuss my concerns about H.R. 3132.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 3. During the hearing you stated that the internal Commission procedures are “quite adequate.” If that is the case, please identify specifically how the procedures will institutionally prevent the abuses identified by the IG during the tenure of your predecessor.

ANSWER.

In 2011, the Commission completed a substantial revision of the Internal Commission Procedures. I was not yet a member of the Commission at the time, but I understand that a number of the revisions were crafted to address conflicts that had arisen prior to my arrival. During my tenure as Chairman, I have found that the Commission functions well under the procedures as modified in 2011, and therefore do not see a need for legislation.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 4.

The June 26, 2012 NRC IG Report “*Possible Violations of Reorganization Plan No. 1 of 1980 and NRC’s Internal Commission Procedures by NRC Chairman*” (2012 IG Report) states:

“President Carter said that the Chairman has a functional duty under the Reorganization Plan to declare emergency authority, and if he enacted emergency authority without a declaration, he would have been in violation of the Reorganization Plan. President Carter envisioned a Chairman exercising emergency authority for a specific transient emergency lasting a matter of days, not emergency authority for a matter of months.”

- a. Do you agree with President Carter that a chairman has a functional duty to declare emergency authority? If not, why not?
- b. How long do you believe a chairman should be allowed to exercise emergency authority?

ANSWER.

- a. I firmly believe that a Chairman who begins exercising emergency authority should declare that he or she is doing so, and I have committed to doing so in testimony before this Committee. In any event, it is now a statutory requirement, under Public Law 113-76, that the NRC Chairman provide notification to the Commission and Congress within one day after beginning to exercise emergency authority.
- b. A Chairman should be allowed to exercise emergency authority for the duration of the emergency, however long it lasts. The key consideration should not be how long the Chairman has been exercising emergency authority, but rather whether there is, or is not, an ongoing emergency situation.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 5.

The 2012 IG Report states:

"President Carter stated it would have been inappropriate for the Chairman to exercise emergency authority for a nuclear incident in Japan. Absent a domestic emergency, the authority lies with the full Commission and any review of the nuclear incident in Japan should have been in the hands of the Commission."

Do you believe the use of emergency authority for foreign events is warranted? Why or why not?

ANSWER.

In general, I agree that an NRC Chairman should be able to respond appropriately and effectively to a foreign nuclear emergency without needing to use any emergency authority under Section 3 of the Reorganization Plan. The Chairman exercises existing authority as official spokesman and principal executive officer in supervising the agency staff responding to the emergency. It is only when there is a need to establish new policy, issue an order on a matter not delegated to the NRC staff, or perform any other function normally assigned to the Commission, that the Chairman would need to invoke emergency powers in order to resolve the matter herself. For an emergency involving a foreign country, this need is less likely to arise. With that said, I would not want to foreclose the possibility of a nuclear emergency in a foreign country that could call for more substantial emergency response actions by the NRC—for example a nuclear event in a neighboring country that has cross-border effects—and that may therefore require use of the NRC organizational structure specifically designed for emergency response.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 6. During an emergency, the chairman or a designee acts as the Executive Team Director. NRC briefing materials list the Executive Team Director's key responsibilities for an activated operations center as the following:

- *"Receive initial and periodic briefings on the nature and progression of the incident*
- *Ensure other Commissioners are kept informed*
- *Manage external interface (Federal agencies, White House, States, Congressional officials, State Department, IAEA, tribal organizations)*
- *Call to Governor's designee and DHS Secretary*
- *Review and approve Situation Report (SITREP) and Press Releases*
- *Determine if Site Team (expanded activation mode) is necessary*
- *Prepare/Act as agency spokesperson for news center and interagency events (e.g. WH briefings)*

Please explain why the inclusion of an emergency declaration would be burdensome considering these key responsibilities already exist and procedures have been established for managing necessary communications.

ANSWER.

As noted in the answer to question 5 above, it is now a statutory requirement that the NRC Chairman provide notice within one day after beginning to exercise emergency authority.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 7. The 2012 IG Report states: "Several officials commented that NRC has no procedures to follow for the Chairman to assert his emergency authority." Do you believe the NRC should have a procedure that clearly articulates the circumstances or actions that would require a chairman to exercise emergency authority and describes the process for doing so?

- a. If so, please describe what you believe should be included in such a procedure.
- b. If not, why not?

ANSWER.

I do not believe any additional procedures are necessary. Public Law 113-76, as I refer to in other answers, now requires the NRC Chairman to provide notifications within one day after commencing exercise of emergency authority. In addition, Reorganization Plan No. 1 of 1980 already sets forth the circumstances that would empower a Chairman to exercise emergency authorities (i.e., there must be "an emergency pertaining to a particular facility or materials licensed or regulated by the Commission"). Also under the Plan, emergency-response actions requiring exercise of emergency authority would, in general, be those actions that, in non-emergency situations, the full Commission could exercise under section 1 of the Plan. Because of the unpredictable nature of emergencies, I believe that section 3 of the Reorganization Plan appropriately provides flexibility to allow an NRC Chairman (or the Chairman's designee) to respond to the emergency at hand.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 7 (sic). According to NRC briefing materials, licensees are required to notify the NRC of an event within 15 minutes. The NRC then expects to notify – within one hour – EPA, DOE, DHS, HHS, USDA, and FEMA. For what length of time do you believe a chairman should be allowed to unilaterally exercise the power of the fully commission before notifying the public, the Congress, and fellow Commissioners?

ANSWER.

My intent is to provide notice to the Commission as soon as reasonably possible, but not later than within one day after commencing exercise of emergency authority as required by Public Law 113-76. In addition, I support the additional change to the Internal Commission Procedures to continue this requirement.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 8. The Office of Public Affairs leads one of the teams staffing the operations center during an emergency. Wouldn't this be an appropriate and efficient manner to notify the public in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER.

During an emergency, the Office of Public Affairs would likely be involved in the process of notifying the public about the emergency.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 9. One of the chairman's responsibilities as the Executive Team Director is to keep the commissioners informed. Do you believe the procedures in place to meet that responsibility would be adequate to notify fellow commissioners in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER.

We will ensure that appropriate procedures are in place to carry out the notification requirements under Public Law 113-76.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 10. The Office of Congressional Affairs participates on one of the team staffing the operations center during an emergency. Do you believe this be an appropriate and efficient manner to notify Congressional officials in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER.

Public Law 13-76 requires notification to Congress within one day after the Chairman commences exercise of emergency authority. The Office of Congressional Affairs would likely be involved in the process of complying with this requirement.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 11. NRC's procedures reference communications that are pre-planned. Do you believe developing preplanned notifications of a chairman's decision to exercise emergency authority might be an effective way to ensure the timeliness and efficiency of such notification? If not, why not?

ANSWER.

Pre-planned notifications are certainly one option to consider.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 12. In the hearing, you testified that the agency's budget is developed by NRC staff. Section 201 of the Energy Reorganization Act of 1974 states: "*Each Member of the Commission, including the Chairman, shall have equal responsibility and authority in all decisions and actions of the Commission, shall have full access to all information relating to the performance of his duties or responsibilities, and shall have one vote.*"

The prior NRC chairman asserted budget authority to unilaterally close down the legally-mandated review of the Yucca Mountain repository license application. Since the budget is a major instrument of policymaking, which is the purview of the Commission, please describe whether you believe the Chairman should be allowed to influence budget development prior to considerations by the full commission.

ANSWER.

The NRC's Performance Budget is formulated consistent with provisions of both the Energy Reorganization Act of 1974, and the Reorganization Plan No. 1 of 1980. Per the Energy Reorganization Act of 1974, the Chairman of the Commission is the principal executive officer of the Commission and he or she exercises all the executive and administrative functions of the Commission, including functions of the Commission with respect to the use and expenditure of funds. Functions reserved to the Commission include those with respect to revising budget estimates and determining the distribution of appropriated funds according to the major programs and purposes. The Reorganization Plan of 1980 strengthened the executive and administrative roles of the NRC Chairman. The Plan provides that the Chairman shall determine the use and expenditure of funds according to major programs and purposes approved by the Commission. Further, the Plan provides that the Chairman shall present the budget estimate to the Commission for its consideration. Under this statute, the preparation of the budget estimate shall be delegated to the Executive Director for Operations, subject to the Chairman's direction and supervision.

The NRC's internal budget development and review process encompasses steps that recognize the role of the Chairman and the Commission. The initial step in the process at the Commission level is for the Chairman to provide high-level planning objectives for budget development and prioritization of planned activities to the Commission for review and approval. Through this process, the Chairman ensures that the staff-prepared budget submitted to the Chairman is aligned with strategic direction from the Commission. Based on the high-level planning objectives, the Executive Director for Operations and the Chief Financial Officer submit to the Chairman a budget with their workload estimates, resource requirements and narrative justifications. The Chairman reviews the senior management budget input and submits his or her decisions to the Commission for review, analysis, and approval through the Commission voting process.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 13. Section 201 of the Energy Reorganization Act of 1974 states:
"In carrying out any of his functions under the provisions of this section the Chairman shall be governed by general policies of the Commission and by such regulatory decisions, findings, and determinations as the Commission may by law be authorized to make."

Section 2 of the Reorganization Plan of 1980 states: *"The Chairman as principal executive officer and the Executive Director for Operations shall be governed by the general policies of the Commission and by such regulatory decisions, findings, and determinations, including those for reorganization proposals, budget revisions and distribution of appropriated funds, as the Commission may by law, including this Plan, be authorized to make."*

If a majority of the Commission believes that the Chairman is failing to operate in accordance with the internal commission procedures, what action do you think commissioners should take? Do you believe legislation authorizing such action would provide clarity to such a situation?

ANSWER.

Our Internal Commission Procedures (ICPs), which we vote on and establish as a collegial body, set forth a framework governing the conduct of business at the Commission level of the NRC. These procedures may be changed or waived by a majority of the Commission, and when questions arise regarding implementation or interpretation of the ICPs, we resolve those issues as a collegial body, consistent with existing law.

I believe that our ICPs are clear and legislation providing clarity is unnecessary. In my experience, the Commission operates very well as a collegial decision-making body and we freely discuss issues with one another. As with any issue of concern, members of the Commission, including the Chairman, should make every effort to discuss a perceived failure to follow the ICPs directly with one another and strive to resolve such issues collegially through our existing procedures. I believe legislation in this area could have a negative impact on our ability to function as a collegial body.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 14.

The NRC Inspector General issued a report “NRC Chairman’s Unilateral Decision to Terminate NRCs Review of DOE Yucca Mountain Repository License Application” on June 6, 2011 (2011 OIG Report):

“OIG reviewed the Commissioners’ voting process associated with SECY-10-0102 and learned that the internal Commission Procedures were not followed relative to voting deadline, extension requests, or polling of other Commissioners to determine whether they agree with extension requests.”

And:

“Although the notational voting process associated with SECY-10-0102 was complete as of October 29, 2010, as of the date of this report the Commission has not held an affirmation vote on the matter and the draft order continues to sit in deliberation before the Commission for affirmation.”

- a. Please indicate how long you believe a chairman or commissioner should be allowed to prevent an adjudicatory decision from being finalized.
- b. Please describe what you believe would be the best mechanism to ensure Internal Commission Procedures are enforced.
- c. Please provide any other resolution to such a situation that you believe would be effective at ensuring adjudicatory decisions are not unnecessarily delayed.

ANSWER.

The Commission seeks to provide meaningful hearing opportunities to the public, while at the same time providing license applicants a prompt resolution of adjudicatory disputes concerning their applications. The time needed for the Commission’s consideration and resolution of an adjudicatory matter will vary, and will be informed by a number of factors, including the nature of the legal, factual, and/or policy issues that must be decided. These issues may vary in number, and in legal and technical complexity. With this in mind, the Commission’s rules of procedure in 10 C.F.R. Part 2 provide broad latitude for the Commission to take action as a collegial body in individual proceedings, to ensure prompt and effective resolution of matters set for adjudication.

As to the Commission’s internal decision-making process, the Internal Commission Procedures (the ICP’s) provide that Commissioners’ votes on Commission papers – including adjudicatory papers – are normally requested in 10 business days. The ICPs further provide that approval of extensions of time to vote on an adjudicatory paper must be given by a Commission majority. Once voting is complete on an adjudicatory paper, the NRC adjudicatory staff will submit the draft final order to establish a majority position on the decision. Commissioners at that time have an opportunity to make changes to the order and/or incorporate additional views. As soon

as a majority position on the decision has been established, the Secretary of the Commission will poll the Commission on scheduling the affirmation of the decision, and an affirmation will then be scheduled to obtain a formal vote of the Commission. In sum, the ICPs provide a comprehensive, clear process to guide Commission action on adjudicatory matters.

In view of the robust internal procedures already in place, no revisions to the ICPs – or other mechanisms – are needed to ensure that the ICPs are enforced. Each adjudication is different. The Commission continues to work collegially, taking into account all Commission priorities, to ensure the issuance of reasoned, thoughtful decisions based on informed adjudicatory records, consistent with the Commission's stated goal of achieving prompt resolution of adjudicatory disputes.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 15. Please describe any unintended consequences you believe H.R. 3132 presents. For each postulated consequence please provide legislative language you believe would adequately mitigate it.

ANSWER.

The current legal framework for Commission governance and operation, as set out in Energy Reorganization Act of 1974, and the Reorganization Plan No. 1 of 1980, together with the Commission's ICPs, provide all the structure the Commission needs to fulfill its responsibilities. The Energy Reorganization Act, which provides that each Commissioner shall have equal responsibility and authority in all decisions and actions of the Commission, full access to information relating to the performance of his or her duties or responsibilities, and one vote, reflects Congress's intent that a multi-member Commission should establish policy and determine nuclear regulation. The Reorganization Plan No. 1 of 1980 corrected deficiencies in the Commission's functioning, evidenced by the agency's response to the accident at Three Mile Island, by vesting the executive, administrative, and emergency management functions of the agency in one person. To implement these statutes, the Commission approved a framework that more clearly defined the operational responsibilities of the Chairman and the other members of the Commission.

Essentially, the Chairman of the NRC has additional responsibilities in limited, specific areas in order to enhance the Commission's ability to carry out its responsibilities. The Chairman of the NRC has very little power or independent authority, and the few additional responsibilities the Chairman has are designed to benefit the Commission, not the Chairman. In my view, by eliminating what little authority or responsibility the Chairman has to develop policy planning and guidance, present budget estimates and proposals, and direct the activities of the Office of Public Affairs and the Office of Congressional Affairs, H.R. 3132 will unnecessarily prolong budget development and policy planning and guidance, will negatively impact the agency's ability to communicate the Commission's policies clearly and consistently, and will not result in better decision-making by the Commission as a collegial body. By requiring the Chairman or her delegate to involve all other Commissioners in the decision-making surrounding an agency response to an emergency, H.R. 3132 eliminates improvements to the agency's ability to respond effectively in an emergency that were recommended by the President's Commission on the Accident at TMI (Kemeny Commission). As written, H.R. 3132 also removes the Chairman's or delegate's ability to respond immediately to a security threat to NRC-licensed or regulated materials or facilities, and requires the Chairman or delegate to wait for another federal agency to make a determination that a security event is imminent. In short, H.R. 3132 will not help the Commission function more collegially, and may impede the Commission's effectiveness in managing day-to-day responsibilities as well as emergencies.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 16. Please provide any other opinions you believe may further inform the Committee's consideration of H.R. 3132.

ANSWER.
Please see my answer to question 15 above.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Cathy Castor

QUESTION 1. During the hearing, I raised the issue of official international travel by the Commissioners. As I requested during the hearing, please provide an explanation of why your international travel is worth the taxpayer expense and time away from your responsibilities at the Commission.

ANSWER.

International activities are an integral part of the Nuclear Regulatory Commission's (NRC's) work, and are managed in a manner consistent with NRC's domestic organizational and programmatic priorities. The Commission's foreign travel is guided by the importance of engagement with a nuclear community that grows more global every day. Ranging from the sharing of nuclear power plant operating experience, collaborating with regulatory counterparts on the import and export of nuclear materials and equipment, fulfilling nonproliferation objectives, and supporting international conventions and treaties, Commissioners dedicate time and resources to overseas travel in order to advance messages or policy positions on the many pressing issues that are or will affect nuclear safety and security the United States.

NRC's international activities and the Commission's foreign travel focus on engagement with countries to exchange experience related to both radiological materials and nuclear power plant operating, construction and licensing activities that are directly applicable to nuclear safety and security in the United States. By traveling overseas to engage with senior international regulatory counterparts, Commissioners share regulatory insights concerning both radioactive materials and operating experience information from other countries that can be applied to the domestic program. NRC's program of assistance helps to strengthen regulatory programs and build relationships with senior nuclear regulatory officials around the world. As the senior-most officials of the NRC, members of the Commission act as a force-multiplier in the promotion of nuclear safety and have an unparalleled ability to influence key international activities.

As statutorily mandated, and in support of United States Government (USG) nonproliferation objectives, the NRC is responsible for the safe and secure export and import of nuclear materials and equipment. For example, the Commission seeks opportunities for close collaboration with counterpart regulators to ensure that the NRC is in compliance with the International Atomic Energy Agency's Code of Conduct on the Safety and Security of Radioactive Sources, which the Energy Policy Act of 2005 adopted into U.S. law.

As obligated by the USG, the NRC also implements key provisions in various international legal instruments. Illustrative of these obligations is NRC's activities in support of the Convention on Nuclear Safety (CNS). NRC ensures that obligations under these and other such agreements that impact NRC licensees are properly implemented, and NRC participates in regularly scheduled international meetings to exchange information with other CNS Contracting Parties. For example, in 2014 the Chairman will present the U.S. National Report at the CNS Review Meeting and will use that opportunity to engage with counterpart regulators of the 77 CNS Contracting Parties.

In the last fifteen years, several events have significantly changed the landscape within which NRC conducts its domestic and international activities. These events include the terrorist attacks of September 11, 2001, and the subsequent focus on securing radioactive materials of

concern, the resurgence of new build for commercial power plants in the United States and abroad, including the significant number of "new entrant" countries seeking nuclear power programs, and the March 2011 Fukushima-Daiichi accident following the Tōhoku earthquake and tsunami. In addition, the manufacture of nuclear parts and the provision of nuclear services have been significantly reduced in the United States for domestic nuclear power plant construction, which has created a dependence on the global marketplace among U.S. nuclear power plant owners/operators.

A part of this trend has been the increased visibility of international standards and international peer reviews, as well as a focus on strengthening and harmonizing the international import-export regime. The Commission is best able to influence these international developments by traveling internationally and bringing to bear insights gained from foreign counterparts on domestic rulemaking and licensing decision-making.

There is strong support for the NRC's international activities from the Congress as well as other Federal agencies. For example, the Congress authorized and appropriated funding in 2004 for NRC to conduct international assistance activities relating to both new nuclear power plants and the safety and security of radioactive materials. Commission travel is coordinated with, and is frequently directly responsive to, USG foreign policy priorities, at a level seen as appropriate for an independent agency. Participation by Commissioners in international conferences and bilateral meetings enhances the USG and NRC's influence with nuclear regulatory officials around the world.

In addition, we believe that nuclear safety and security must be universal priorities, regardless of political structure, reactor design, or any other factors that may place countries in contrast with one another. We remain committed to providing regulatory assistance as much as our resources will allow. For countries with nuclear power plants, or which may consider building nuclear plants in the future, there are common technical and licensing issues that regulators must address irrespective of the chosen design. Countries that use radioactive sources for medical, agricultural, or industrial purposes also require a robust regulatory infrastructure to ensure that materials are safely used and securely stored, preventing worker or public overexposure, theft, or diversion.

While on international travel, the Commissioners continue to conduct their domestic responsibilities. The Commissioners participate in voting on issues before them and regularly interact with staff and interested stakeholders via email and conference calls, even if this requires working at non-traditional hours. The Commission's work does not stop while a member is away, whether on domestic or foreign travel. The Commission ensures that its priority is on nuclear safety and security in the United States and globally.

Attachment 2 – Member Requests for the Record
Questions for Chairman Macfarlane
The Honorable Steve Scalise

During the hearing, Members asked you to provide additional information for the record, and you indicated that you would provide that information. For your convenience, descriptions of the requested information are provided below.

QUESTION 1. Chairman Macfarlane, during the hearing you agreed to provide for the record the number of Tier 2 and Tier 3 Post-Fukushima requirements that the NRC is considering. Please provide a list of the items under consideration or further research.

ANSWER

The following table details the three Tier 2 Fukushima Near Term Task Force (NTTF) recommendations that the NRC is considering:

Source of Tier 2 Activity	Description and Status of Tier 2 Activity
NTTF Report Recommendations 7.2-7.5	Description: Require licensees to provide reliable spent fuel pool makeup capabilities. Status: Per Commission direction, staff action on these recommendations has been consolidated with the NTTF Recommendation 4 Station Blackout Mitigation Strategies Rulemaking which is on schedule for issuance in 2016
NTTF Report Recommendation 9.3 (partial)	Description: Issue a generic order to nuclear power plants requiring a revision to the emergency plan to address multiunit dose assessments, periodic training and exercises for multiunit and prolonged SBO scenarios, drills on identification and acquisition of offsite resources, and ensuring sufficient emergency preparedness (EP) resources for multiunit and prolonged SBO scenarios. Status: With the exception of multiunit dose assessments, each of these activities is being accomplished through implementation of the Tier 1 Mitigation Strategies Order. Regarding multiunit dose assessments, licensees have submitted information regarding their capabilities to conduct these assessments. The staff expects to issue responses by the end of February 2014.
SECY-12-0025, Enclosure 3	Description: Reevaluate other natural external hazards against current requirements and guidance and update the design basis. Take appropriate regulatory action to resolve issues associated with updated site-specific hazards. Status: This Tier 2 item will incorporate insights from the ongoing flooding and seismic reevaluations and will begin once sufficient staff resources become available

In Enclosure 3 of SECY-13-0095, "Fourth 6-Month Status Update on Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Subsequent Tsunami", the NRC provided an assessment of the current status of each of the Tier 3 activities. The following table lists the 15 Tier 3 Fukushima NTTF recommendations that the NRC is considering:

Source of Tier 3 Activity	Description of Tier 3 Activity
NTTF Report Recommendation 2.2	Ten-year confirmation of seismic and flooding hazards.
NTTF Report Recommendation 3 (partial)	Potential enhancements to the capability to prevent or mitigate seismically-induced fires and floods.
NTTF Report Recommendation 5.2	Reliable hardened vents for other containment designs.
NTTF Report Recommendation 6	Hydrogen control and mitigation inside containment or in other buildings.
NTTF Report Recommendations 9.1, 9.2	EP enhancements for prolonged SBO and multiunit events.
NTTF Report Recommendation 9.3 (partial)	Emergency Response Data System (ERDS) capability.
NTTF Report Recommendation 10	Additional EP topics for prolonged station blackout and multiunit events.
NTTF Report Recommendation 11	EP topics for decision-making, radiation monitoring, and public education.
NTTF Report Recommendation 12.1	Reactor Oversight Process modifications to reflect the recommended defense-in-depth framework.
NTTF Report Recommendation 12.2	Staff training on severe accidents and resident inspector training on severe accident management guidelines.
SECY-12-0025, Enclosure 2	Basis of emergency planning zone size.
SECY-12-0025, Enclosure 2	Pre-staging of potassium iodide beyond 10 miles.
SECY-12-0025, Enclosure 2	Transfer of spent fuel to dry cask storage.
SECY-12-0025, Enclosure 2	Reactor and containment instrumentation withstanding beyond design basis conditions
COMGBJ-11-0002	Determine Applicability of Lessons Learned to Other Regulated Facilities

Attachment 2 – Member Requests for the Record
Questions for Chairman Macfarlane
The Honorable H. Morgan Griffith

QUESTION 1. Chairman Macfarlane, during the hearing you agreed to provide more detail as to how the Commission plans to adapt to an environment in which it receives less money in operating fees as a result of the increased number of plants permanently shutting down. Please provide detailed information including estimates of the decrease in incoming fees and the steps NRC will take to adjust its budget accordingly.

ANSWER.

As stated in the response to Whitfield Question 3, the NRC budget is determined through the appropriations and NRC's total fee collection is based on OBRA-90, as amended. Currently, the NRC is developing the FY 2014 Proposed Fee Rule (Revision of Fee Schedules) which will explain how the fees for the agency's FY 2014 budget are expected to be recovered. The NRC plans to publish this proposed rule for comment by the end of March 2014.



CHAIRMAN

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

January 13, 2014

The Honorable Lois Capps
United States House of Representatives
Washington, DC 20515

Dear Congresswoman Capps:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I wanted to follow up on your request at the December 12, 2013 hearing before the House Energy and Commerce Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy for a copy of a non-concurrence concerning Diablo Canyon Nuclear Power Plant's seismic design basis, which was filed in 2012 by the then-NRC senior resident inspector at the plant.

Before the conclusion of the hearing, NRC's Office of Congressional Affairs provided to your staff an electronic copy of the non-concurrence, as well as a document that provides an explanation of the technical details discussed in the non-concurrence.

Enclosed are paper copies of these two documents. We hope that the inclusion of the detailed comments responding to the non-concurrence will provide additional context and a better understanding of the agency's regulatory decision on this complex subject.

If you need any additional information, please contact me or Rebecca Schmidt, Director of the Office of Congressional Affairs, at (301) 415-1776.

Sincerely,

A handwritten signature in black ink, appearing to read "Allison M. Macfarlane".

Allison M. Macfarlane

Enclosure:
As stated

cc: Representative Fred Upton
Representative Henry Waxman

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ENCLOSURE 1

Non-Concurrence Process Record for NCP-2012-001

Non-Concurrence Process Record for NCP-2012-001

The U.S. Nuclear Regulatory Commission (NRC) strives to establish and maintain an environment that encourages all employees to promptly raise concerns and differing views without fear of reprisal and to promote methods for raising concerns that will enhance a strong safety culture and support the agency's mission.

Individuals are expected to discuss their views and concerns with their immediate supervisors on a regular, ongoing basis. If informal discussions do not resolve concerns, individuals have various mechanisms for expressing and having their concerns and differing views heard and considered by management.

Management Directive MD 10.158, "NRC Non-Concurrence Process," describes the Non-Concurrence Process (NCP). http://pbaduows.nrc.gov/docs/ML0706/ML_070660506.pdf

The NCP allows employees to document their differing views and concerns early in the decision-making process, have them responded to, and attach them to proposed documents moving through the management approval chain.

NRC Form 757, Non-Concurrence Process is used to document the process.

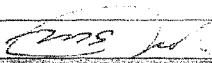
Section A of the form includes the personal opinions, views, and concerns of an NRC employee.

Section B of the form includes the personal opinions and views of the NRC employee's immediate supervisor.

Section C of the form includes the agency's evaluation of the concerns and the agency's final position and outcome.

NOTE: Content in Sections A and B reflects personal opinions and views and does not represent official factual representation of the issues, nor official rationale for the agency decision. Section C includes the agency's official position on the facts, issues, and rationale for the final decision.

The agency's official position (i.e., the document that was the subject of the non-concurrence) is included in ADAMS accession number ML120450843.

NRC FORM 757 NRC MD 10.159 (7-2011)		U.S. NUCLEAR REGULATORY COMMISSION	
		NON-CONCURRENCE PROCESS	
		NCP TRACKING NUMBER	NCP-2012-001
SECTION A - TO BE COMPLETED BY NON-CONCURRING INDIVIDUAL			
TITLE OF SUBJECT DOCUMENT DIABLO CANYON POWER PLANT - INSPECTION REPORT 05000275/323-2011005		ADAMS ACCESSION NO. ML120450843	
DOCUMENT SIGNER Neil O'Keefe,		SIGNER PHONE NO. (817) 200-1141	
TITLE Chief		ORGANIZATION Project Branch B, Region IV	
NAME OF NON-CONCURRING INDIVIDUAL(S) Michael Peck		PHONE NO. (803) 593-2354	
TITLE Senior Resident Inspector		ORGANIZATION Project Branch B, Region IV	
<input checked="" type="checkbox"/> DOCUMENT AUTHOR		DOCUMENT CONTRIBUTOR	DOCUMENT REVIEWER
<input type="checkbox"/> ON CONCURRENCE			
REASONS FOR NON-CONCURRENCE AND PROPOSED ALTERNATIVES			
<p>Issue: Pacific Gas and Electric (PG&E) completed a deterministic reevaluation of the local seismology.¹ This reevaluation concluded that three local faults could produce about 70% greater vibratory ground motion than described in the Final Safety Analysis Report Update (FSARU) for the double design/safe shutdown earthquake. The licensee completed a prompt operability determination (POD)² to assess the effect on the capability of plant structures, systems and components (SSCs) to perform the specified safety functions at the higher vibratory motions.</p> <p>The inspection report documented the results of the NRC inspection of the seismic POD.³ The report stated that the POD provided an initial basis for concluding a reasonable assurance that plant equipment would withstand the potential effect of the new vibratory ground motion. The inspector non-concurs with the report because the POD failed to meet either the licensee's procedural requirements or the NRC standard for operability. As a result, the licensee failed to demonstrate a reasonable assurance that all Diablo Canyon SSCs were capable of performing the specified safety functions as described in the plant design bases.</p> <p>The POD was inadequate because the licensee failed to demonstrate that the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code acceptance limits were met for reactor coolant pressure boundary components at the higher structural stress levels represented by the new seismic information. As defined in 10 CFR 50.55a, "Codes, and Standards," the Code acceptance limits established a minimum standard for operability.</p> <p>The POD was also inadequate because the licensee failed to demonstrate that all seismically qualified plant SSCs would continue to function at the higher vibratory motion associated with new seismic information in accordance with the double design (safe shutdown) earthquake design basis.</p> <p>Background - Current Seismic Design and Licensing Basis (CLB)</p> <p>Seismic qualification for Diablo Canyon SSCs were developed from three design bases⁴ events:</p> <ul style="list-style-type: none"> • Design Earthquake (DE): This safety analysis implemented the 10 CFR 100 requirements for the Operational Basis Earthquake. The DE (0.2 g)⁵ represented the maximum vibratory ground motion that could reasonably be expected during the operating life of the plant. The DE ensured the seismic qualification for which those plant features necessary for continued operation remain functional without undue risk to the health and safety of the public. • Double Design Earthquake (DDE): This safety analysis implemented the 10 CFR 100 requirements for the safe shutdown earthquake. The DDE (0.4 g) represented the maximum earthquake potential (producing the maximum vibratory ground motion) for all earthquake epicenters within 200 miles and faults within 75 miles of the plant. The DDE established the seismic qualification requirements for plant SSCs necessary to: 			
SIGNATURE 		<input checked="" type="checkbox"/> CONTINUED IN SECTION D DATE Jan 26, 2012	
SEE SECTION E FOR IMPLEMENTATION GUIDANCE			

NRC FORM 757 NRC MD 10.158 (7-2011)		U.S. NUCLEAR REGULATORY COMMISSION	
NON-CONCURRENCE PROCESS			
		NCP TRACKING NUMBER NCP-2012-001	
TITLE OF SUBJECT DOCUMENT DIABLO CANYON POWER PLANT - INSPECTION REPORT 05000275/323-2011005		ADAMS ACCESSION NO. <i>ANL120450843</i>	
SECTION D: CONTINUATION PAGE			
CONTINUATION OF SECTION <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C			
<ul style="list-style-type: none"> - Ensure the integrity of the reactor coolant pressure boundary, - Prevent or mitigate design basis accidents, and - Safely shutdown the plant. <p>• Hosgri Event (HE): This safety analysis implemented a PG&E commitment to the NRC to demonstrate that the plant could be safely shutdown following a postulated 7.5 M earthquake on the Hosgri Fault line (0.73 g).</p> <p>The HE represented the largest ground motion of the three design basis events. However, SSC seismic qualification was limited by each of the three design basis earthquakes. For example, the safety analysis predicted higher vibratory motion for DE and DDE than the HE at the steam generators, as shown in Figure 1. The bounding vibratory motion (shaking), used to seismically qualify individual plant components, was a function of the component location. As shown in Figure 2, the DDE provided the limiting floor response spectrum for the 88 foot level of the containment building. The seismic qualification of plant structures was also limited by both the DDE and HE, dependant on location. For example, the seismic qualification of the lower levels of the containment structure were limited by the HE design basis while the upper levels were dominated by the larger DDE spectrum. Portions of the reactor coolant pressure boundary were more limited by the DE and DDE than HE. These differences in qualification requirements resulted from different assumptions, methods, design basis values/inputs, and acceptance criteria approved for each seismic safety analysis.</p>			
Figure 1 Comparison of DE, DDE, & HE Horizontal Response Spectrum at the Steam Generators			
<p>The Diablo Canyon Long Term Seismic Program (LTSP)</p> <p>Several groups raised seismic safety concerns during the original Diablo Canyon licensing process. A major concern was related to the faulting style assumed in the HE safety analysis. To address these concerns, the NRC included Condition 2.C(7) with the original plant license. This license condition required PG&E to identify, examine, and evaluate all relevant geological and seismic data and information that became available since the 1979 Atomic Safety and Licensing Board hearing. From this information, the licensee was required to complete probabilistic and deterministic studies to assure the adequacy of seismic margins. This re-evaluation became known as the LTSP.</p> <p>PG&E completed the LTSP and submitted the final report to the NRC in 1980. The licensee concluded that the original seismic design basis (DE & DDE) plus the HE was adequate and no changes were necessary. In 1991 the NRC accepted the LTSP final report and closed the License Condition? The NRC concluded that the LTSP did not alter the plant seismic qualification or design basis. In 1991, PG&E made three commitments associated with closure of the LTSP:</p> <ul style="list-style-type: none"> • Use the LTSP data to maintain seismic margins for future modifications of certain plant equipment, • Maintain a strong geosciences and engineering staff, and • Continue to operate a strong-motion accelerometer array and coastal seismic network. <p style="text-align: right;">2</p>			
SEE SECTION E FOR IMPLEMENTATION GUIDANCE			
NRC FORM 757 (7-2011)		Use ADAMS Template NRC-806	

NRC FORM 757 NRC MD 10.158 (7-2011)		U.S. NUCLEAR REGULATORY COMMISSION	
NON-CONCURRENCE PROCESS			NCF TRACKING NUMBER NCP-2012-001
TITLE OF SUBJECT DOCUMENT DIABLO CANYON POWER PLANT - INSPECTION REPORT 05000275/123-2011005		ADAMS ACCESSION NO. ML120450843	
SECTION D: CONTINUATION PAGE			
CONTINUATION OF SECTION <input checked="" type="checkbox"/> A B C			
Figure 2 Comparison of DDE and HE Containments Floor Response at 80 Foot			
Sequence of Events <ul style="list-style-type: none"> • November 2008: The licensee notified the NRC of a new offshore seismic feature located about a mile from the plant. This offshore feature became known as the Shoreline fault. The licensee postulated that an earthquake on the Shoreline fault could produce between 0.69 to 0.74 g peak ground acceleration at the plant. The licensee concluded a POD was not required because the new ground motion was bound by the LTSP deterministic ground motion spectrum. • September 2010: The NRC identified that an earthquake on the Shoreline Fault could produce about 70 percent greater peak ground motion assumed in the DDE/safe shutdown earthquake design basis. • October 2010: The NRC requested that PG&E evaluate that capability (operability) of plant SSCs to perform the safety functions at the higher ground motions. • December 2010: PG&E concluded that a POD was not required because of previous agreements reached with the NRC that new seismic information only needed to be evaluated by the LTSP.⁶ • January 2011: PG&E completed and submitted to the NRC a reevaluation of the local seismology. This report concluded that three local earthquake faults (Shoreline, San Luis Bay, and Los Osos) could produce about 70% greater ground motion than the DDE.⁹ 			
3			
SEE SECTION E FOR IMPLEMENTATION GUIDANCE			
Use ADAMS Template NRC-006			

NRC FORM 757 NRC MD 10.15e (7-2011)		U.S. NUCLEAR REGULATORY COMMISSION	
NON-CONCURRENCE PROCESS		NCP TRACKING NUMBER NCP-2012-001	
TITLE OF SUBJECT DOCUMENT DIABLO CANYON POWER PLANT - INSPECTION REPORT 05000275/323-2011005		ADAMS ACCESSION NO. <i>ML120450843</i>	
SECTION D: CONTINUATION PAGE			
CONTINUATION OF SECTION <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C			
<ul style="list-style-type: none"> • March 2011: The NRC opened Diablo Canyon Unresolved Item: 05000275; 323/2011002-03, "Requirement to Perform an Operability Evaluation Following Receipt of New Seismic Information." This unresolved item was used to track NRC review of the licensee's conclusion that new seismic information did not have to be evaluated against the plant design basis. • June 2011: PG&E concluded that the new seismic information was a nonconforming condition as defined by their corrective action program. The licensee completed a POD to assess the effect of the new information on the capability of plant equipment. The licensee concluded that all plant SSCs were operable because the new ground motions were enveloped by the HE ground motions. The licensee stated that NRC operability guidance allowed use of the HE safety analysis to demonstrate that the DDE design basis was met.¹⁰ • August 2011: The NRC concluded that new seismic information developed by the licensee was required to be evaluated against each of the three design basis earthquakes use to establish plant seismic qualification. Comparison only to the HE or LTSP (margin to Hosgri) was not sufficient to ensure all plant SSCs were capable of performing the specified safety functions.¹¹ • October 2011: PG&E revised the POD to reformat the information. The licensee did not make any substantive changes supporting operability.¹² • October 2011: PG&E requested the NRC approve the HE design basis as the safe shutdown earthquake for Diablo Canyon.¹³ • December 2011: PG&E supplemented the October 2011 request with a detailed list of deviations and exceptions between the HE design basis and NRC Standard Review Plan.¹⁴ 			
<p>Pacific Gas and Electric Seismic Prompt Operability Determination</p> <p>PG&E concluded that all SSCs were operable because the new seismic deterministic ground motion spectrums were bound by HE design basis. The POD stated that HE safety analysis, including methods, design basis values/inputs, and acceptance criteria, was an acceptable alternative method for concluding that all plant SSC met the specified safety functions for the DDE.</p> <p>NRC Operability Standard^{15,16}</p> <p>To be considered operable, plant SSCs must be capable of performing the specified safety functions specified by design and within the required range of design physical conditions, initiation times, and mission times. The specified function(s) are those safety functions described in the CLD for the facility and are based on safety analysis of specific design basis events.</p> <p>Immediate operability determinations are made without delay, using the best available information. PODs are a follow-up to immediate determinations when additional information, such as supporting analysis, is needed to confirm the immediate determinations. In both cases, the available information should be sufficient to conclude that the SSC is operable. The scope of an operability determination must be sufficient to address the capability of SSCs to perform their specified safety function(s). The licensee should declare the SSC inoperable if at any time the available information is inadequate to support a reasonable assurance that degraded or nonconforming SSCs are capable of performing the specified safety function(s).</p> <p>The failure to meet a General Design Criteria or a Regulation should be treated as a degraded or nonconforming condition and is an entry condition for an operability determination.</p> <p>The operability determination should assess credible consequential failures previously considered in the design. For example, equipment described in the safety analysis needed to mitigate a loss of coolant accident must be capable of performing those functions after the shaking associated with the DDE.</p>			
SEE SECTION E FOR IMPLEMENTATION GUIDANCE			
NRC FORM 757 (7-2011) Use ADAMS Template NRC-006			

NRC FORM 757 NRC MD 10.169 (7-2011)		U.S. NUCLEAR REGULATORY COMMISSION	
NON-CONCURRENCE PROCESS			NCP TRACKING NUMBER NCP-2012-001
TITLE OF SUBJECT DOCUMENT DIABLO CANYON POWER PLANT - INSPECTION REPORT 05000275/321-2011005		ADAMS ACCESSION NO. <i>ML120450843</i>	
SECTION D: CONTINUATION PAGE			
CONTINUATION OF SECTION <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C			
<p>Licenses may use alternative analytic methods (different methods than described in the CLB) when performing PODs. These alternative methods must be technically appropriate to the facility design and produce results consistent with the applicable acceptance criteria in the CLB. The alternative method should not over-predict SSC performance and licensees should perform benchmark comparisons with the CLB methods. Use of alternate methods does not include substitution of design basis, design basis functions or values/inputs. Use of alternative methods is not permitted in cases where a Regulation or license condition specifies the name of an analytic method for a particular application. In such cases, the application of the alternate analysis must be consistent with the licensing condition or Regulation. For example, ASME Boiler and Pressure Vessel Code methods and acceptance limits are specified by 10 CFR 50.55a. Licensees are not permitted use margins above the Code acceptance limits (or Code Cases) for demonstrating operability. These margins are reserved for the NRC.</p> <p>A SSC is either operable or inoperable. The guidance does not provide for an indeterminate conclusion of operability.</p> <p>Pacific Gas and Electric's Operability Standard¹⁷</p> <p>The PG&E operability procedure closely paralleled the NRC Technical Guidance. The licensee's process allowed use of margin between the actual capability of degraded/nonconforming SSCs and the specified safety functions as defined in the design basis. The licensee's POD may credit conservatism within the design or margin gained by using compensatory actions.</p> <p>The specified safety function(s) are those functions the SSCs were designed to accomplish as described in the UPSAR and other CLB documents. When SSC capability is degraded to point where it cannot perform the specified safety function, with a reasonable expectation of reliability, then the system should be judged inoperable. Alternate methods (engineering judgment) apply to calculational methods and should not be used to change design inputs.</p> <p>Analysis of the Pacific Gas and Electric Seismic Prompt Operability Determination</p> <p>The inspector concluded that the seismic POD did not meet either the NRC nor the licensee's standards:</p> <ul style="list-style-type: none"> • The POD failed to demonstrate that the integrity of the reactor coolant system pressure boundary would be maintained following a DDE <p>The reactor coolant system specified safety functions included that pressure boundary integrity would be maintained following the combined structural loading resulting from the DDE (safe shutdown earthquake) and a loss of coolant accident. This safety function is met by demonstrating that the ASME Boiler and Pressure Vessel Code, Section III, acceptance limits would be met. The licensee was required to calculate the resultant component stresses using the Code methodology, as specified in the plant design, including the specified DDE design basis values and design information. The POD was inadequate because the licensee failed to provide a reasonable assurance that the Code acceptance limits would not be exceeded for the DDE design basis case given the 70% increase in seismic vibratory ground motion.</p> <p>The licensee's substitution of the HE design basis for demonstrating the DDE Code acceptance criteria were met was not an acceptance approach by either the licensee's operability procedure or the NRC operability guidance. This was a concern because in many cases, the reactor coolant pressure boundary stress was more limiting for the DDE than HE (see Figure 1).</p> <ul style="list-style-type: none"> • The POD failed to demonstrate that equipment necessary to prevent or mitigate an accident would remain functional following a safe shutdown earthquake <p>In many cases the DDE safety analysis provided the bounding vibratory motion used to establish the seismic qualification for plant SSC. For example, the FSARU credited the containment fan coolers to mitigate the design basis loss of coolant and steam line break accidents. The design basis required these coolers to be qualified to function following the vibratory motion (shaking) associated with the DDE. These coolers are located on the BB foot level of the containment building. As shown in Figure 2, the DDE vibratory motion was greater than HE at this location. The POD was inadequate because the licensee failed to</p>			
5			
SEE SECTION E FOR IMPLEMENTATION GUIDANCE			
NRC FORM 757 (7-2011)		Use ADAMS Template NRC-068	

NRC FORM 757 NRC ID 10198 (7-2011)		U.S. NUCLEAR REGULATORY COMMISSION	
NON-CONCURRENCE PROCESS			NCP TRACKING NUMBER NCP-2012-001
TITLE OF SUBJECT DOCUMENT DIABLO CANYON POWER PLANT - INSPECTION REPORT 05000275/323-2011005		ADAMS ACCESSION NO. ML120950843	
SECTION D: CONTINUATION PAGE			
CONTINUATION OF SECTION <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C			
<p>demonstrate that the coolers would still function at the increased motion associated with the new seismic information for the DDE case.</p> <p>Safety Consequence</p> <p>The seismic design bases and FSARU safety analyses provide reasonable assurance that nuclear safety is maintained following postulated earthquakes. PG&E developed new seismic information that concluded the bounding DDE safety analysis was no longer in conformance with NRC Regulations.¹⁰ The licensee implemented corrective actions in the form of a license amendment request. This information is currently under NRC review. The operability process is used to determine if the licensee can continue to safely operate the plant pending completion of these corrective actions. The PG&E POD used to conclude that the operability threshold was met was inconsistent with the licensee's procedures and NRC Technical Guidance. As a result, the Inspector was unable to conclude that key plant SSCs, including the reactor coolant pressure boundary, remain operable. An inoperable conclusion does not necessarily equate to an unsafe condition. However, a declaration of inoperable SSC would require additional NRC engagement before the licensee would be permitted to operate the plant beyond the Technical Specification out-of-service times.</p> <p>Recommendation</p> <p>The Inspector recommends that the NRC issue a violation with this inspection report associated with the failure of PG&E to follow the station operability determination procedure.</p> <p>Endnotes</p> <p>¹ "Report on the Analysis of the Shoreline Fault Zone, Central Coast California to the NRC," January 7, 2011, ADAMS ML110140400</p> <p>² PG&E Notification 50086062</p> <p>³ Diablo Canyon Integrated Inspection Report 05000275/2011005 and 05000323/2011005, Section 1R1S</p> <p>⁴ FSARU Sections 2.5.2.9, "Maximum Earthquake," and 3.7.1.1, "Design Response Spectra,"</p> <p>⁵ Peak ground acceleration- gravity</p> <p>⁶ PG&E Long Term Seismic Program Final Report, DCL-88-192, July 1988</p> <p>⁷ SSER 34</p> <p>⁸ Notification 50086062, Task 30</p> <p>⁹ "Report on the Analysis of the Shoreline Fault Zone, Central Coast California to the NRC," January 7, 2011, ADAMS ML110140400</p> <p>¹⁰ Notification 50410266</p> <p>¹¹ "Task Interface Agreement - Concurrence on Diablo Canyon Seismic Qualification Current Licensing and Design Basis," August 1, 2011, ADAMS ML112130665</p> <p>¹² Notification 50410266</p> <p>¹³ Pacific Gas and Electric, License Amendment Request 11-05, "Evaluation of Process for New Seismic Information and Clarifying the Diablo Canyon Power Plant Safe Shutdown Earthquake," ADAMS ML113112A166</p> <p>¹⁴ Pacific Gas and Electric, "Standard Review Plan Comparison Tables for License Amendment Request 11-05," ADAMS ML11312A166</p> <p>¹⁵ NRC Inspection Procedure 71111.05, "Operability Determinations and Functionality Assessments"</p> <p>¹⁶ NRC Inspection Manual, Part 9900: Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety," ADAMS ML073440103</p> <p>¹⁷ PG&E Procedure OM7.1D.12, Operability Determinations, Revision 22</p> <p>¹⁸ 10 CFR 100, Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants."</p>			
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SEE SECTION E FOR IMPLEMENTATION GUIDANCE			
NRC FORM 757 (7-2011) Use ADAMS Template NRC-006			

NRC FORM 757 NRC MD 10.15b (7-2011)		U.S. NUCLEAR REGULATORY COMMISSION	
NON-CONCURRENCE PROCESS			NCP TRACKING NUMBER NCP-2012-001
TITLE OF SUBJECT DOCUMENT DIABLO CANYON POWER PLANT - INSPECTION REPORT 05000275/123-2011005		ADAMS ACCESSION NO. ML 120450843	
SECTION B - TO BE COMPLETED BY NON-CONCURRING INDIVIDUAL'S SUPERVISOR			
NAME <i>Neil O'Keefe</i> TITLE <i>Chief, Projects Branch B</i> PHONE NO. <i>(817) 200-1141</i> ORGANIZATION <i>Region IV, Division of Reactor Projects</i> COMMENTS FOR THE NCP REVIEWER TO CONSIDER <i>See attached.</i>			
<i>Additional information and explanation of the issues discussed in this non-concurrence can be found in ADAMS ML 120450843</i>			
CONTINUED IN SECTION D			
SIGNATURE <i>CFO/Kef</i>	DATE <i>2/8/12</i>		
SEE SECTION E FOR IMPLEMENTATION GUIDANCE			

SECTION B

Comments:

Dr. Peck has thoroughly researched these issues. The actual facts are not in dispute. Some of the information he has presented involve some personal conclusions made as a result of connecting diverse documents and various sources of requirements and guidance. Dr. Peck has attempted to address concerns solely using the operability assessment process, but additional process(es) will be needed to address the whole issue. This issue is an unusual case that required regional management discussions with NRR to determine the correct application of the Part 9900 guidance to inspectors. The first section of the Part 9900 specifically states that this is the way to deal with cases where the guidance may not be directly applicable. It is important to note that the Part 9900 document is guidance to the NRC staff, not a regulation.

While this concern has overtones of safety, the actual questions are procedural. In order to categorically show that there are no safety problems, a full and complete operability evaluation is ultimately needed. However, the generic process for performing an operability evaluation requires a clear current licensing basis that directly relates to the non-conforming condition that is being analyzed. The actual seismic current licensing basis did not provide a way to evaluate new information that becomes available. Therefore, the licensee has proposed a methodology to perform the full operability evaluation to the NRC as a license amendment request, and the staff is evaluating the best way to proceed.

NRC FORM 757 NRC MD 10-158 (7-2011)		U.S. NUCLEAR REGULATORY COMMISSION	
NON-CONCURRENCE PROCESS		NCP TRACKING NUMBER NCP-2012-001	
TITLE OF SUBJECT DOCUMENT DIABLO CANYON POWER PLANT - INSPECTION REPORT 05000275/323-2011005		ADAMS ACCESSION NO. <u>ML130450843</u>	
SECTION C - TO BE COMPLETED BY DOCUMENT SPONSOR			
NAME	<u>Neil O'Keefe</u>		
TITLE	<u>Chief, Projects Branch B</u>		
ORGANIZATION	<u>Region IV, Division of Reactor Projects</u>		
SUMMARY OF ISSUES	<p><i>See attached.</i></p>		
ACTIONS TAKEN TO ADDRESS NON-CONCURRENCE			
<p><i>See attached</i></p>			
SIGNATURE--DOCUMENT SPONSOR	<u>CFO</u>	TITLE	<u>Chief, Branch B</u>
ORGANIZATION	<u>Region IV, DRP</u>	DATE	<u>2/8/12</u>
SIGNATURE--NCP REVIEWER	<u>Matt T. Pruet</u>	TITLE	<u>Deputy Director DRP</u>
ORGANIZATION	<u>Region IV</u>	DATE	<u>2/13/2012</u>
NCP OUTCOME			
Non-Concurring Individual:	CONCURS <input checked="" type="checkbox"/>	NON-CONCURS <input type="checkbox"/>	WITHDRAWS NON-CONCURRENCE (i.e., discontinues process) <input type="checkbox"/>
AVAILABILITY OF NCP FORM			
Non-Concurring Individual:	<input checked="" type="checkbox"/>	WANTS NCP FORM PUBLIC	WANTS NCP FORM NON-PUBLIC <input type="checkbox"/>
SEE SECTION 2 FOR IMPLEMENTATION GUIDANCE			
<small>NRC FORM 757 (7-2011) Use ADAMS Template NRC-006</small>			

SECTION C

Summary of Issues:

Dr. Peck concluded that a Pacific Gas and Electric prompt operability determination, addressing new seismic information, failed to meet either the licensee's operability or the NRC inspection procedure requirements. As a result, the licensee has not provided an adequate basis to conclude that all seismically qualified structures, systems, and components, are capable of performing as described in the current licensing bases. Dr. Peck recommended that the NRC include a violation in Inspection report 05000275/2011005; 05000323/2011005 associated with the failure of the licensee to follow their operability determination procedure.

Dr. Peck believes that the Pacific Gas and Electric operability procedure and the NRC inspection guidance establish that licensees are expected to demonstrate that a reasonable assurance of equipment capability exist, at any point in time, to conclude that equipment is operable and that these evaluations are performed using the current licensing bases.

Actions Taken to Address Non-concurrence:

Regional management has reviewed and discussed these issues and the associated documents over a period of months. The Director and Deputy Director of DRP, as well as the new and previous branch chiefs for Diablo Canyon, have had numerous discussions with Dr. Peck on these specific concerns. The facts are well-understood. However, the regulatory path forward must be determined through discussions between regional management and NRR. Several discussions have already occurred. The complete operability evaluation that Dr. Peck wants cannot be made by the licensee without the NRC agreeing on the correct way to perform the evaluation, what calculation method and design values are appropriate for the new data, and what plant capability must be demonstrated by this evaluation.

Region IV held a meeting on January 30, 2012, to address how the Part 9900 operability evaluation guidance applies to this situation with representatives from NRR and RES. This meeting resulted in full agreement on the following statements:

- The ground motion data and the calculation method, including damping values, are correlated parameters. They must be based on the same assumptions for the calculation to have validity.
- It is appropriate for the licensee to use the available new ground motion data in the Hosgri Earthquake analysis because the new ground motion data is consistent with that evaluation.
- The NRC will not ask the licensee to use the new ground motion input data in the Design Earthquake or the Double Design Earthquake evaluations because the new ground

motion data does not match the assumptions in those analyses. Attempting to do so would create a numerical result that is not technically justified.

- The licensee's use of the Hosgri Earthquake as an immediate operability assessment method was consistent with the Part 9900 guidance for use of alternative evaluation methods. This immediate operability assessment was appropriate per the Part 9900 guidance, and is an adequate basis to conclude that there is reasonable assurance of operability. The NRC approved the Hosgri Earthquake analysis with the knowledge that the new (at the time) Hosgri seismic information was not able to be used in the Design and Double Design Earthquake analyses.
- It is also appropriate for the licensee to seek NRC approval of the method to perform the more detailed assessment of operability compared to the Design Earthquake and Double Design Earthquake consistent with the prompt operability assessment specified in the Part 9900 guidance.
- The plant continues to be operated safely, including consideration for the new seismic data.

The action proposed by Dr. Peck to take enforcement action at this time is not appropriate based on the discussion above. Procedure OM7 ID12, "Operability Determination," Revision 22 was reviewed in the places indicated by Dr. Peck as potentially involving a violation. No violation of the station procedure was noted during this review, since his conclusion that a violation existed was predicated on first agreeing with his conclusion that the licensee had not sufficiently demonstrated an initial basis for operability, which is contrary to the staff position.

The inspection report wording has been changed to modify the following sentence to which Dr. Peck objected:

"The inspectors concluded that the revised operability determination provided an initial basis for concluding a reasonable assurance that plant equipment would withstand the potential effect of the new vibratory ground motion."

will be revised to state:

"The staff concluded that the revised operability determination provided an initial basis for concluding a reasonable assurance that plant equipment would withstand the potential effect of the new vibratory ground motion."

With this modification, the report will issue a violation for failure to perform an operability evaluation between June and October, 2011, and will state that the licensee has submitted a license amendment to address this issue.

ENCLOSURE 2

Additional Branch Chief Comments Related
To NCP 2012-001 with Annotations

**ADDITIONAL BRANCH CHIEF COMMENTS RELATED TO
NCP 2012-001 WITH ANNOTATIONS**

Background: The purpose of this document is to provide detailed comments and context associated with Non-concurrence Package 2012-001 (ADAMS ML12151A173) because the topics discussed in NCP-2012-001 were complex and not fully explained. The action taken in response to NCP-2012-001 was to indicate that the NRC would address the operability question through a change to the current licensing basis, not through the enforcement process as proposed. However, as the branch chief responsible for Diablo Canyon Power Plant, I felt it was important to provide additional information on some of the details raised in NCP-2012-001 so that readers would have additional perspective on the issues and be able to recognize that the details described in NCP-2012-001 were reviewed, understood, and considered prior to taking action on NCP-2012-001. The following was cut and pasted from the original NCP-2012-001 (without the diagrams), and has not been altered except to include comments in the margins. – Neil O’Keefe

Issue: Pacific Gas and Electric (PG&E) completed a deterministic reevaluation of the local seismology.¹ This reevaluation concluded that three local faults could produce about 70% greater vibratory ground motion than described in the Final Safety Analysis Report Update (FSARU) for the double design/safe shutdown earthquake. The licensee completed a prompt operability determination (POD)² to assess the effect on the capability of plant structures, systems and components (SSCs) to perform the specified safety functions at the higher vibratory motions.

The inspection report documented the results of the NRC inspection of the seismic POD.³ The report stated that the POD provided an initial basis for concluding a reasonable assurance that plant equipment would withstand the potential effect of the new vibratory ground motion. The inspector non-concurs with the report because the POD failed to meet either the licensee’s procedural requirements or the NRC standard for operability. As a result, the licensee failed to demonstrate a reasonable assurance that all Diablo Canyon SSCs were capable of performing the specified safety functions as described in the plant design bases.

The POD was inadequate because the licensee failed to demonstrate that the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code acceptance limits were met for reactor coolant pressure boundary components at the higher structural stress levels represented by the new seismic information. As defined in 10 CFR 50.55a, “Codes, and Standards,” the Code acceptance limits established a minimum standard for operability.

The POD was also inadequate because the licensee failed to demonstrate that all seismically qualified plant SSCs would continue to function at the higher vibratory motion associated with new seismic information in accordance with the double design (safe shutdown) earthquake design basis.

Background - Current Seismic Design and Licensing Basis (CLB)

Seismic qualification for Diablo Canyon SSCs were developed from three design bases⁴ events:

- Design Earthquake (DE): This safety analysis implemented the 10 CFR 100 requirements for the Operational Basis Earthquake. The DE (0.2 g)⁵ represented the maximum vibratory ground motion that could reasonably be expected during the

Comment [n1]: Throughout this document, the phrase “prompt operability determination” has the specific connotation that the licensee was done evaluating operability. The staff has taken the position that the licensee had completed a “prompt operability determination (IOD) as described in Part 6900, and still needed to seek NRC approval to be able to complete a final operability evaluation.

Comment [n2]: These ASME Code limits pertain to acceptance criteria contained in the current licensing basis for the Design Earthquake and Double Design Earthquake, but not in the larger Hogen Event. The NRC specified different acceptance criteria for the

Comment [n3]: Contrary to this statement, 10 CFR 50.55a does not contain operability requirements. It requires compliance with the Code except where proposed alternatives that are accepted by the NRC provide an acceptable level of quality and safety. The NRC approved the HE with alternative measures to the Code.

Comment [n4]: This earthquake analysis is considered to be approximately equivalent to the OBE, but was not proposed or approved to meet the 10 CFR 100 requirements, since the plant design predates Part 100.

operating life of the plant. The DE ensured the seismic qualification for which those plant features necessary for continued operation remain functional without undue risk to the health and safety of the public.

- Double Design Earthquake (DDE): This safety analysis implemented the 10 CFR 100 requirements for the safe shutdown earthquake. The DDE (0.4 g) represented the maximum earthquake potential (producing the maximum vibratory ground motion) for all earthquake epicenters within 200 miles and faults within 75 miles of the plant. The DDE established the seismic qualification requirements for plant SSCs necessary to:
 - Ensure the integrity of the reactor coolant pressure boundary,
 - Prevent or mitigate design basis accidents, and
 - Safely shutdown the plant.
- Hosgri Event (HE): This safety analysis implemented a PG&E commitment to the NRC to demonstrate that the plant could be safely shutdown following a postulated 7.5 M earthquake on the Hosgri Fault line (0.75 g).

The HE represented the largest ground motion of the three design basis events. However, SSC seismic qualification was limited by each of the three design basis earthquakes. For example, the safety analysis predicted higher vibratory motion for DE and DDE than the HE at the steam generators, as shown in Figure 1. The bounding vibratory motion (shaking), used to seismically qualify individual plant components, was a function of the component location. As shown in Figure 2, the DDE provided the limiting floor response spectrum for the 88 foot level of the containment building. The seismic qualification of plant structures was also limited by both the DDE and HE, depending on location. For example, the seismic qualification of the lower levels of the containment structure were limited by the HE design basis while the upper levels were dominated by the larger DDE spectrum. Portions of the reactor coolant pressure boundary were more limited by the DE and DDE than HE. These differences in qualification requirements resulted from different assumptions, methods, design basis values/inputs, and acceptance criteria approved for each seismic safety analysis.

Figure 1 [Not included - See NCP-2012-001]
 Comparison of DE, DDE, & HE Horizontal Response Spectrum at the Steam Generators

The Diablo Canyon Long Term Seismic Program (LTSP)

Several groups raised seismic safety concerns during the original Diablo Canyon licensing process. A major concern was related to the faulting style assumed in the HE safety analysis. To address these concerns, the NRC included Condition 2.C(7) with the original plant License. This license requirement required PG&E to identify, examine, and evaluate all relevant geological and seismic data and information that became available since the 1979 Atomic Safety and Licensing Board hearing. From this information, the licensee was required to complete probabilistic and deterministic studies to assure the adequacy of seismic margins. This re-evaluation became known as the LTSP.

PG&E completed the LTSP and submitted the final report to the NRC in 1988.¹⁰ The licensee concluded that the original seismic design basis (DE & ODE) plus the HE was adequate and no changes were necessary. In 1991 the NRC accepted the LTSP final report and closed the

Comment [n5]: Similarly, the DDE is considered to be approximately the equivalent to the SSE, but was not proposed or approved to meet the Part 100 requirements.

Commentary This section is designed to stimulate discussion and debate. It is intended to provide a forum for the exchange of ideas and opinions on issues related to the field of environmental health.

1980-81
1981-82

10. The following table shows the number of hours worked by 1000 workers in a certain industry.

which had higher protein contents per acre than the other plots. The highest protein content was found in the 1966 crop, which was harvested at the same time as the 1965 crop. The 1965 crop was harvested at the end of the rainy season, while the 1966 crop was harvested during the dry season. The 1966 crop had a higher protein content than the 1965 crop, but the difference was not statistically significant. The 1966 crop had a higher protein content than the 1965 crop, but the difference was not statistically significant.

Government [and]... This is not just because it's a better deal for the U.S. It's also about leadership, how important it is to have all of our allies come together to face one of the most important challenges of our time.

Q: What do you think about the new president? A: I think he's a good president. He's been able to make some very important decisions that will help our country move forward.

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License Condition.⁷ The NRC concluded that the LTSP did not alter the plant seismic qualification or design basis. In 1991, PG&E made three commitments associated with closure of the LTSP:

- Use the LTSP data to maintain seismic margins for future modifications of certain plant equipment;
- Maintain a strong geosciences and engineering staff, and
- Continue to operate a strong-motion accelerometer array and coastal seismic network.

Figure 2 [Not included - See NCP-2012-0011]
Comparison of DDE and HE Containments Floor Response at 88 Foot

Sequence of Events

- November 2008: The licensee notified the NRC of a new offshore seismic feature located about a mile from the plant. This offshore feature became known as the Shoreline fault. The licensee postulated that an earthquake on the Shoreline fault could produce between 0.69 to 0.74 g peak ground acceleration at the plant. The licensee concluded a POD was not required because the new ground motion was bound by the LTSP deterministic ground motion spectrum.
- September 2010: The NRC identified that an earthquake on the Shoreline Fault could produce about 70 percent greater peak ground motion assumed in the DDE/safe shutdown earthquake design basis.
- October 2010: The NRC requested that PG&E evaluate that capability (operability) of plant SSCs to perform the safety functions at the higher ground motions.
- December 2010: PG&E concluded that a POD was not required because of previous agreements reached with the NRC that new seismic information only needed to be evaluated by the LTSP.⁸
- January 2011: PG&E completed and submitted to the NRC a reevaluation of the local seismology. This report concluded that three local earthquake faults (Shoreline, San Luis Bay, and Los Oslo) could produce about 70% greater ground motion than the DDE.⁹
- March 2011: The NRC opened Diablo Canyon Unresolved Item: 05000275; 323/2011002-03, "Requirement to Perform an Operability Evaluation Following Receipt of New Seismic Information." This unresolved item was used to track NRC review of the licensee's conclusion that new seismic information did not have to be evaluated against the plant design basis.
- June 2011: PG&E concluded that the new seismic information was a nonconforming condition as defined by their corrective action program. The licensee completed a POD to assess the effect of the new information on the capability of plant equipment. The licensee concluded that all plant SSCs were operable because the new ground motions were enveloped by the HE ground motions. The licensee stated that NRC operability

Comment [n11]: The LTSP neither changed the CLB nor became a new part of the CLB. This is important to the operability question because the LTSP cannot be used as the basis of comparison. The licensee had initially concluded that no operability evaluation was needed because the new seismic data was below the LTSP ground motion. Prior to completion of the Shoreline Report, the LTSP actually contains the most modern and complete seismic information, but since it was not used to design or license the plant, it is not a legal part of the CLB.

Comment [n12]: The data in this graph was not verified as part of our review. However, the results clearly show that the two curves have very different damping values in the separate calculations. As a result, the curve that seems to show the larger acceleration is associated with much lower ground motion than the other curve. A comparison of the two curves is shown in the following graph to illustrate that the DDE can produce much larger calculational results than the much larger Hostos Earthquake because the DDE used very conservative calculational values.

Comment [n13]: This LPO was issued in conjunction with Technical Bulletin Agreement Item 05000275.

Comment [n14]: In operability evaluations, requirements are often based on the design and licensing requirements and the actual operability of available systems. In this case, the new seismic data which demonstrated that the DDE ground motion requirement should be used to measure in the case of a ground motion, not only encompassed operability by comparing to the largest ground motion, but also addressed a license amendment request for NRC approval of a program method to reduce the need

guidance allowed use of the HE safety analysis to demonstrate that the DDE design basis was met.¹⁰

- August 2011: The NRC concluded that new seismic information developed by the licensee was required to be evaluated against each of the three design basis earthquakes used to establish plant seismic qualification. Comparison only to the HE or LTSP (margin to Hogen) was not sufficient to ensure all plant SSCs were capable of performing the specified safety functions.¹¹
- October 2011: PG&E revised the POD to reformat the information. The licensee did not make any substantive changes supporting operability.¹²
- October 2011: PG&E requested the NRC approve the HE design basis as the safe shutdown earthquake for Diablo Canyon.¹³
- December 2011: PG&E supplemented the October 2011 request with a detailed list of deviations and exceptions between the HE design basis and NRC Standard Review Plan.¹⁴

Pacific Gas and Electric Seismic Prompt Operability Determination

PG&E concluded that all SSCs were operable because the new seismic deterministic ground motion spectrums were bound by HE design basis. The POD stated that HE safety analysis, including methods, design basis values/inputs, and acceptance criteria, was an acceptable alternative method for concluding that all plant SSC met the specified safety functions for the DDE.

NRC Operability Standard^{15,16}

To be considered operable, plant SSCs must be capable of performing the specified safety functions specified by design and within the required range of design physical conditions, initiation times, and mission times. The specified function(s) are those safety functions described in the CLB for the facility and are based on safety analysis of specific design basis events.

Immediate operability determinations are made without delay, using the best available information. PODs are a follow-up to immediate determinations when additional information, such as supporting analysis, is needed to confirm the immediate determinations. In both cases, the available information should be sufficient to conclude that the SSC is operable. The scope of an operability determination must be sufficient to address the capability of SSCs to perform their specified safety function(s). The licensee should declare the SSC inoperable if at any time the available information is inadequate to support a reasonable assurance that degraded or nonconforming SSCs are capable of performing the specified safety function(s).

The failure to meet a General Design Criteria or a Regulation should be treated as a degraded or nonconforming condition and is an entry condition for an operability determination.¹⁷

The operability determination should assess credible consequential failures previously considered in the design. For example, equipment described in the safety analysis needed to

Comment 14(b): This statement reflects the conclusion from TIC 50-10-001 dated August 1, 2011, paragraph 1, regarding the TIC response that needs to address the required supplemental information.

Comment 14(c): This statement is in support of the licensee. The TIC did not conclude this comment until after the above reporting.

Comment 14(d): This statement is in support of the licensee. The licensee revised the operational program and submitted a corresponding list of modifications and a corresponding list of specific parts of the CLB in order to allow shipment and use of packages containing fuel rods. However, CLB document A-1000 addressed a supplemental report that did not

Comment 14(e): This and in the form of a separate addendum, the licensee used to complete the new Seismic Prompt operability determination. This was provided in advance of the final operability determination.

Comment 14(f): The staff concludes that using this procedure to bind the largest ground motion spectrum to provide a reasonable margin of safety is a reasonable approach. The maximum credible ground motion spectrum should be the ultimate constraint.

Comment 14(g): This statement is in support of the licensee. The TIC did not conclude this statement until after the above reporting. The TIC concluded that the required information was lack of context and of relevance to either the revised operational program or the revised addendum. This statement was also provided in the addendum to the TIC, and the staff disagreed with this again. Then, the TIC concluded that the revised operational program and the revised addendum TICC implemented in most situations, and it will be soon need to issue a final addendum for the TIC.

Comment 14(h): It describes an understanding reached with respect to the proposed modification to the operational program, not concerning the addendum.

mitigate a loss of coolant accident must be capable of performing those functions after the shaking associated with the DDE.

Licensees may use alternative analytic methods (different methods than described in the CLB) when performing PODs. These alternative methods must be technically appropriate to the facility design and produce results consistent with the applicable acceptance criteria in the CLB. The alternative method should not over-predict SSC performance and licensees should perform benchmark comparisons with the CLB methods. Use of alternate methods does not include substitution of design basis, design basis functions or values/inputs. Use of alternative methods is not permitted in cases where a Regulation or license condition specifies the name of an analytic method for a particular application. In such cases, the application of the alternate analysis must be consistent with the licensing condition or Regulation. For example, ASME Boiler and Pressure Vessel Code methods and acceptance limits are specified by 10 CFR 50.55a. Licensees are not permitted use margins above the Code acceptance limits (or Code Cases) for demonstrating operability. These margins are reserved for the NRC.

A SSC is either operable or inoperable. The guidance does not provide for an indeterminate conclusion of operability.

Pacific Gas and Electric's Operability Standard¹⁷

The PG&E operability procedure closely paralleled the NRC Technical Guidance. The licensee's process allowed use of margin between the actual capability of degraded/nonconforming SSCs and the specified safety functions as defined in the design basis. The licensee's POD may credit conservatism within the design or margin gained by using compensatory actions.

The specified safely function(s) are those functions the SSCs were designed to accomplish as described in the UFSAR and other CLB documents. When SSC capability is degraded to point where it cannot perform the specified safety function, with a reasonable expectation of reliability, then the system should be judged inoperable. Alternate methods (engineering judgment) apply to calculational methods and should not be used to change design inputs.

Analysis of the Pacific Gas and Electric Seismic Prompt Operability Determination

The inspector concluded that the seismic POD did not meet either the NRC nor the licensee's standards:

- The POD failed to demonstrate that the integrity of the reactor coolant system pressure boundary would be maintained following a DDE

The reactor coolant system specified safety functions included that pressure boundary integrity would be maintained following the combined structural loading resulting from the DDE (safe shutdown earthquake) and a loss of coolant accident. This safety function is met by demonstrating that the ASME Boiler and Pressure Vessel Code, Section III, acceptance limits would be met. The licensee was required to calculate the resultant component stresses using the Code methodology, as specified in the plant design, including the specified DDE design basis values and design information. The POD was inadequate because the licensee failed to provide a reasonable assurance that the Code acceptance limits would not be exceeded for the DDE design basis case given the 70% increase in seismic vibratory ground motion.

Comment [n23]: This statement is precluded on incorrectly considering the 10 CFR Part 100 requirements to apply directly to DCPP. The HE was approved to similar but modified criteria

Comment [n23]: This statement is the opinion of the inspector. Neither the example nor the conclusion are supported by the actual guidance in Part 5900 Section C.4.

Comment [n24]: In discussions with the inspector, he states given that the operability determination effectively relied upon changes to the design inputs. No design inputs were actually changed.

Comment [n25]: The inspector has the opinion that the new ground motion should be evaluated under the DDE using an operability determination. The staff position was that this question would be addressed in the license amendment request to clarify the CLB requirements to be used as a basis for comparison.

Comment [n26]: The licensee was required to do this calculation for 0.4g during licensing. The staff position was that the licensee should specify how new information needs to be addressed. Since DCPP has three earthquakes in the CLB and none could be considered to bound all circumstances, the staff position is that NRC approval is needed to decide how to evaluate the new ground motion information.

The licensee's substitution of the HE design basis for demonstrating the DDE Code acceptance criteria were met was not an acceptance approach by either the licensee's operability procedure or the NRC operability guidance. This was a concern because in many cases, the reactor coolant pressure boundary stress was more limiting for the DDE than HE (see Figure 1).

- The POD failed to demonstrate that equipment necessary to prevent or mitigate an accident would remain functional following a safe shutdown earthquake.

In many cases the DOE rarely analyzes provided the licensing authority numbers used to establish the seismic qualification for plant ESGC. For example, the PSEGUL credited the conservatism of the codes to mitigate the design basis, loss of coolant and shutdown line break accidents. The design basis required these codes to be qualified to prevent following the vibratory motion of the building associated with the ESGC. These numbers are based on the 1000 year level of the environmental building. As shown in Figure 2, the ESGC vibratory motion was greater than 10% at this location. The PSEGUL made no specific credits to the increased losses to determine that the codes would not reduce the risk associated with the increased motion associated with the new seismic information for the ESGC case.

Safety Consequence

The seismic design bases and FSARU safety analyses provide reasonable assurance that nuclear safety is maintained following postulated earthquakes. PG&E developed new seismic information that concluded the bounding DDE safety analysis was no longer in conformance with NRC Regulations.¹⁹ The licensee implemented corrective actions in the form of a license amendment request. This information is currently under NRC review. The operability process is used to determine if the licensee can continue to safely operate the plant pending completion of these corrective actions. (The PG&E POD used to conclude that the operability threshold was met was inconsistent with the licensee's procedures and NRC Technical Guidance. As a result, the inspector was unable to conclude that key plant SSCs, including the reactor coolant pressure boundary, remain operable. An inoperable conclusion does not necessarily equate to an unsafe condition. However, a declaration of inoperable SSC would require additional NRC engagement before the licensee would be permitted to operate the plant beyond the Technical Specification out of service times.)

Recommendation

The inspector recommends that the NRC issue a violation with this inspection report associated with the failure of PG&E to follow the station operability determination procedure.

Endnotes

- 1 "Report on the Analysis of the Shoreline Fault Zone, Central Coast California to the NRC," January 7, 2011, ADAMS ML110140400
- 2 PG&E Notification 00506062
- 3 Diabolo Canyon Integrated Inspection Report 05000275/2011005 and 05000323/2011005, Section 1R15
- 4 FSARU Sections 2.5.2.9, "Maximum Earthquake," and 3.7.1.1, "Design Response Spectra,"
- 5 Peak ground acceleration- gravity

- 6 PG&E Long Term Seismic Program Final Report, DCL-88-192, July 1988
- 7 SSER 34
- 8 Notification 50086062, Task 30
- 9 "Report on the Analysis of the Shoreline Fault Zone, Central Coast California to the NRC," January 7, 2011, ADAMS ML110140400
- 10 Notification 50410266
- 11 "Task Interface Agreement – Concurrence on Diablo Canyon Seismic Qualification Current Licensing and Design Basis," August 1, 2011, ADAMS ML112130665
- 12 Notification 50410266
- 13 Pacific Gas and Electric, License Amendment Request 11-05, "Evaluation of Process for New Seismic Information and Clarifying the Diablo Canyon Power Plant Safe Shutdown Earthquake," ADAMS ML113112A166
- 14 Pacific Gas and Electric, "Standard Review Plan Comparison Tables for License Amendment Request 11-05," ADAMS ML11312A166
- 15 NRC Inspection Procedure 71111.05, "Operability Determinations and Functionality Assessments"
- 16 NRC Inspection Manual, Part 9900: Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety," ADAMS ML073440103
- 17 PG&E Procedure OM7.ID.12, Operability Determinations, Revision 22
- 18 10 CFR 100, Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants."



CHAIRMAN

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

January 13, 2014

The Honorable Steve Scalise
United States House of Representatives
Washington, DC. 20515

Dear Congressman Scalise:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am writing to follow up on your request in the December 12, 2013 hearing before the House Energy and Commerce Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy for a summary of forthcoming requirements from Fukushima lessons learned.

In response to Questions for the Record (QFR) from the February 28, 2013, hearing, NRC provided an April 26, 2013, reply outlining the post-Fukushima recommendations for potential improvements to the regulation and oversight of nuclear power plants in the U.S. Additionally, the response included discussion of the NRC efforts to manage Cumulative Effects of Regulation (CER). To summarize, there are 35 discrete actions under consideration by the agency that originated from the Near-Term Task Force's recommendations. The merit of each of these actions is evaluated to ensure that called for actions to promote safety actually are needed and do not inadvertently distract licensees from executing other fundamental safety or security responsibilities.

Enclosed is the QFR response. We hope that this information is responsive to your request and would gladly offer you or your staff a briefing to clarify any additional questions or concerns.

If you need any additional information, please contact me or Rebecca Schmidt, Director of the Office of Congressional Affairs, at (301) 415-1776.

Sincerely,

A handwritten signature in black ink, appearing to read "Allison M. Macfarlane".

Allison M. Macfarlane

Enclosure:
As stated

cc: Representative Fred Upton
Representative Henry Waxman

Member Requests for the Record from Representative Steve Scalise

QUESTION. I don't know how anyone can look at this slide and dismiss the cumulative impact of regulations as merely a matter of scheduling, and I am told that, in addition to this, there are approximately 40 more post-Fukushima items yet to be considered. Is that correct?

ANSWER.

The original Near Term Task Force report, from which most post-Fukushima items originated, contained a total of 12 overarching recommendations regarding potential improvements to the regulation and oversight of nuclear power plants in the U.S. Many of these recommendations had subparts, which focused on improved accident mitigation strategies for beyond design basis external hazards, spent fuel pool instrumentation, hardened containment venting systems for boiling water reactors with Mark I and Mark II containments, confirming compliance with seismic and flooding design bases, reevaluating seismic and flooding hazard assumptions, and assessing staffing and communications capabilities during extended station blackout and multi-unit events.

Counting each subpart, there were 35 total recommendations for proposed action. In its evaluation and implementation of these recommendations, the Nuclear Regulatory Commission (NRC) has recognized that many of these proposed actions can be consolidated and addressed by a single action. For example, the Mitigating Strategies Order issued in March 2012, when fully implemented, is expected to address at least seven subparts of various overarching recommendations.

The NRC continues to review and evaluate the remaining post-Fukushima items to determine if there is a sound technical basis to take additional regulatory action. The NRC staff issued its detailed plans for further evaluation of these items in a July 13, 2012, status paper to the

Enclosure

Commission, and issued its latest update on these activities in a February 14, 2013, information paper to the Commission.

The main focus of the NRC's efforts to address the cumulative effects of regulation (CER) is less a matter of scheduling and more one of ensuring that called for actions to promote safety actually are needed and do not inadvertently distract licensees from executing other fundamental safety or security responsibilities. The NRC developed the following definition for the cumulative effects of regulation (CER):

CER describes the challenges that licensees, or other impacted entities (such as State partners) face while implementing new regulatory positions, programs, or requirements (e.g., rules, generic letters, backfits, inspections). CER is an organizational effectiveness challenge that results from a licensee or impacted entity implementing a number of complex regulatory positions, programs or requirements within a limited implementation period and with available resources (which may include limited available expertise to address a specific issue). CER can potentially distract licensee or entity staff from executing other primary duties that ensure safety or security.

In order to address CER, the NRC added procedures to its rulemaking process to provide licensees and other impacted entities an opportunity to inform the NRC of the impacts of proposed rules before they are finalized and implemented. To provide this opportunity, the NRC increased public participation throughout all phases of the rulemaking process, including by seeking specific public comments on CER when proposed rules are published for comment, and by holding a public meeting on implementation during the final rule stage. The NRC also added publishing draft guidance with proposed rules – and final guidance with final rules – to its

rulemaking process. The goal of these additional procedures is to identify any resource constraints early in the rulemaking process, reduce the likelihood of unintended consequences, and improve focus on safety-beneficial activities. While these additional CER-related rulemaking procedures may reduce, or even in some cases eliminate rulemaking actions, such eliminations or reductions are not in this respect a principal objective of CER.

The NRC continues to examine the additional procedures put in place to address CER. Last month, the Commission directed the staff to prepare a report due in March 2015 on the effectiveness of the CER process and its implementation status. The Commission also directed the staff to:

- Develop and implement outreach tools that will allow NRC to consider more completely the overall impacts of multiple rules, orders, generic communications, advisories, and other regulatory actions on licensees and their ability to focus effectively on items of greatest safety import.
- Seek volunteer facilities to perform "case studies" to review the accuracy of cost and schedule estimates used in NRC's regulatory analysis.
- Carefully monitor the CER approach to ensure that no significant unintended consequences result from the direction provided.

As the agency evaluates potential additional regulatory activities, actions planned or already taken will be accounted for in future decisions. For example, the Commission is currently considering a March 27, 2013, staff proposal to change the implementation plans for some additional emergency preparedness recommendations because their intent is being adequately addressed through the implementation of the Orders on mitigating strategies that were issued in March 2012.

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON ENERGY AND COMMERCE

2125 RAYBURN HOUSE OFFICE BUILDING
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Majority (202) 225-2927

Minority (202) 225-3641

January 15, 2014

The Honorable Kristine L. Svinicki
Commissioner
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Commissioner Svinicki:

Thank you for appearing before the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy on Thursday, December 12, 2013, to testify at the hearing entitled "Oversight of NRC Management and the Need for Legislative Reform."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Wednesday, January 29, 2014. Your responses should be e-mailed to the Legislative Clerk in Word format at Nick.Abraham@mail.house.gov and mailed to Nick Abraham, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

Ed Whitfield
Chairman
Subcommittee on Energy and Power

John Shimkus
Chairman
Subcommittee on Environment
and the Economy

cc: The Honorable Bobby L. Rush, Ranking Member, Subcommittee on Energy and Power
The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment



COMMISSIONER

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

February 11, 2014

The Honorable Ed Whitfield
Chairman, Subcommittee on Energy
and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

The Honorable John Shimkus
Chairman, Subcommittee on Environment
and the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Chairman Whitfield and Chairman Shimkus:

I appeared before the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy of the Committee on Energy and Commerce on December 12, 2013, at a hearing entitled, "Oversight of NRC Management and the Need for Legislative Reform," along with my colleagues on the Commission. In response to your letter of January 15, 2014, enclosed please find my responses to questions for the record, directed to me, from that hearing.

If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Kristine L. Svinicki".

Kristine L. Svinicki

Enclosure: As stated

cc: The Honorable Bobby L. Rush
Ranking Member
Subcommittee on Energy and Power

The Honorable Paul Tonko
Ranking Member
Subcommittee on Environment
and the Economy

Questions from Representative Ed WhitfieldQUESTION 1.

According to the NRC staff's FY 2012 report on adverse trends in the industry's safety performance: "...the staff identified no statistically significant adverse trends in industry safety performance." In fact, a closer inspection of the long-term trend graphs in that report shows that the industry is improving safety in 10 out of the 14 graphs. The staff indicated the remaining four: "...did not have a statistically significant trend." However, the nuclear reactor safety budget has grown 48% over the last ten years even though the number of licensing actions and tasks has decreased 40%. Four reactors permanently shut down last year, another one will this year, and reports persist that others may also.

a. Please describe what actions you believe the Commission should take to ensure the budget is commensurate with decreased workload, a shrinking fleet, and improving industry safety performance.

ANSWER.

As a member of the Commission, I participate in deliberations on the agency's annual budget request and subsequent oversight of its execution, with the objective of ensuring that resource requests are commensurate with workload. This includes overseeing the annual budget formulation process of developing a two year projected workload in the Nuclear Reactor Safety Program and the Nuclear Materials and Waste Safety Program. This includes the anticipated number of licensees, as well as the number and complexity of anticipated license applications and other licensing actions. On an annual basis, the Commission oversees the review of the baseline budget and adjusts resource allocations based on several factors, including letters of intent from current and prospective licensees, changes in regulatory requirements, and prior year expenditures. The year prior to executing the budget, the Commission oversees the review of requested resources and associated workload and makes adjustments based on current information. Lastly, in the year of budget execution, the agency adjusts resources commensurate with the level of work currently before it.

b. Please describe any recommendations you believe would improve the prioritization and application of resources to matters that are safety significant.

ANSWER.

Over the last few years, the agency has made improvements to its budgeting processes. Most recently, the NRC adopted a baseline budgeting approach for the development of the Fiscal Year 2015 budget. The approach uses information on the execution of resources from the prior year as a starting point for developing the resource request, then takes into account known "fact-of-life" changes in workload as well as the Commission's planning objectives for budget development and prioritization of planned activities to ensure prioritization and application of resources to matters that are safety significant. Further, during the budget process, the Commission ensures that adequate resources are requested to achieve the safety and security goals and objectives as described in the agency Strategic Plan. The agency should continue these processes to ensure the most effective and efficient application of resources.

Questions from Representative John ShimkusQUESTION 1.

Given the DC Circuit Court of Appeals reaffirmed the NRC's obligation under the Nuclear Waste Policy Act to review the Yucca Mountain license application, do you as an individual commissioner believe it is incumbent upon the NRC to request the funding necessary to complete the license review?

ANSWER.

I am informed by the agency's legal counsel that the court's decision does not compel the NRC to request additional funding from the Nuclear Waste Fund. As an individual member of the Commission, however, I have supported the agency's development of a budget estimate of the costs to fully resume the Yucca Mountain application review, including the associated adjudicatory proceeding. I have and will continue to deliberate with my fellow Commissioners on the question of seeking supplemental or routine appropriations for this purpose in the course of our ongoing budget formulation, a matter upon which we act as a collegial body.

QUESTION 2.

Do you as an individual commissioner believe the NRC should propose a supplemental budget request to the Office of Management and Budget to support full resumption of the license review? If not, why not?

ANSWER.

As an individual member of the Commission, I have supported the agency's development of a budget estimate of the costs to fully resume the Yucca Mountain application review, including the associated adjudicatory proceeding. I have and will continue to deliberate with my fellow Commissioners on the question of seeking supplemental or routine appropriations for this purpose in the course of our ongoing budget formulation, a matter upon which we act as a collegial body.

QUESTION 3.

If the Commission fails to request funding for completing the Yucca Mountain licensing process, do you as an individual commissioner believe that would weaken the basis for Waste Confidence findings?

ANSWER.

No. The "waste confidence" rulemaking that the Commission has underway seeks to adopt the Commission's generic assessment of the environmental impact of several scenarios, including the need for continued storage of spent fuel at reactor sites for an indefinite period of time due to continued uncertainty concerning the licensing and construction of a repository. Although the NRC staff is currently considering and developing responses to the comments received on the generic environmental impact statement (GEIS), NRC's analysis supports the view that not only is it technologically feasible to license and construct a repository, but also that the final GEIS will adequately address the impacts of continued storage under each of these scenarios, without regard to whether additional funds for the licensing process are sought or received.

QUESTION 4.

Given the fact that the NRC routinely issues draft SERs during other license reviews and later revises them, do you as an individual Commissioner believe the Commission should utilize the same approach on the Yucca Mountain license review for the sake of transparency? If not, why not?

ANSWER.

As a part of actions taken in response to the writ of mandamus, the Commission directed the staff to work on completion of the Safety Evaluation Report volumes concurrently, but to release each volume upon its completion. The Commission noted that such serial release, in addition to other benefits, would enhance agency transparency.

QUESTION 5.

Recently, the NRC staff provided a 400-page report to the Commission: "*Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark 1 Boiling Water Reactor.*" The cover memo for that report states:

"This study shows the likelihood of a radiological release from the spent fuel after the analyzed severe earthquake at the reference plant to be very low (about 1 time in 10 million years or lower)."

The staff has provided the Commission with a 200-page report entitled "*Staff Evaluation and Recommendation for Japan Lessons-Learned Tier 3 Issue on Expedited Transfer of Spent Fuel*". In this report, the staff concluded that:

- "The costs of expedited transfer of spent fuel to dry cask storage outweigh the benefits";
- "Additional studies are not needed"; and
- "No further regulatory action is recommended for the resolution of this issue and this Tier 3 item should be closed".

a. As an individual Commissioner, do you have any reason to doubt the NRC staff's competence in this regard?

ANSWER:

The Commission continues to review and deliberate on the staff's recommendation in this matter. Respecting the fact that our ongoing collegial deliberation is not yet concluded, I am not able to comment specifically but will note that my individual vote and accompanying views will be released to the public on the agency's website, upon completion of the Commission's decision-making process.

I will note as a general matter, however, that during my tenure as a member of the Commission I have had occasion to disapprove a staff recommendation to the Commission, in whole or in part. Such disapprovals have arisen or may arise in the future not from any doubt about the staff's professionalism and competency, but rather from my role as an independent decision maker, who may weigh the facts or factors bearing on the matter differently than the staff.

Questions from Representative Joe Barton

QUESTION 1.

In November 2013, NRC released a report entitled "A comparison of U.S. and Japanese regulatory requirements in effect at the time of the Fukushima accident."

a. Do you support all of the findings of the staff report?

ANSWER.

The staff's comparison report was limited in scope and was based solely on documents publicly available, in English, resulting in limitations in the number and breadth of insights provided by the report. That said, I do not have a basis to disagree with or take exception to the report's findings.

b. The authors of the report acknowledge the staff's comparison was not an exhaustive review. Do you think it is appropriate for the Commission to consider revising the NRC's regulatory framework without having an exhaustive review as a solid basis for such a revision?

ANSWER.

On the whole, I have supported the NRC's regulatory response and regulatory actions taken in response to Tier 1 priorities, i.e., those related to preventing or mitigating the types of conditions that contributed to core damage and the release of radioactive materials following the earthquake and tsunami in Japan. I assess these regulatory actions to be appropriate in light of their clear and evident relationship to the accident sequence in Japan. It cannot be dismissed, however, that a more comprehensive regulatory comparison – if one were conducted – could have some bearing on or provide insights into determining the appropriate regulatory response to items less directly related to the accident sequence or that the NRC has binned into lower priority tiers.

c. What differences between the U.S. and Japanese regulatory framework were left out of the final report? Why were they not deemed to merit further analysis?

ANSWER.

As the publicly available voting records show, I advocated for a more comprehensive regulatory comparison to be conducted but failed to secure the support of a Commission majority for undertaking a more comprehensive review. The Commission majority would best be able to identify those areas deemed not to merit further analysis.

The Commission did support, however, the limited comparison referred to in your question, and I believe this analysis, albeit limited, has been beneficial to the agency's work. The comparison did not assess differences in administrative requirements, plant licensing or license amendment processes, reporting and inspection programs, or technical areas unrelated to the sequence of events at Fukushima, among others. The NRC staff has identified examples of technical areas that were not directly related to the sequence of events and therefore not included in the comparison. They include fire protection, security, and design basis accidents (e.g., losses of heat removal or inventory with AC power available).

Questions from Representative Lee Terry

QUESTION 1. Prior to this hearing did Chairman Macfarlane inform you of her intention to declare her opposition to H.R. 3132?

ANSWER.

At the time of the hearing, the Commission as a body had not been solicited for a Commission position on H.R. 3132. Consequently, I had not engaged in deliberations with Chairman Macfarlane, or any other of my colleagues, to solicit individual or a possible consensus view in advance of my appearance on December 12, 2013.

QUESTION 2. Do you support or oppose the policy goals of HR 3132? Would you be willing to work with staff to perfect it?

ANSWER.

I support the goal of H.R. 3132, which I understand to be clarification of certain provisions of the Reorganization Plan No. 1 of 1980 and codification of other, existing provisions. I stand ready to answer questions or lend whatever insights I may have regarding the underlying provisions if this would be of use in the Committee's work on this matter.

QUESTION 3. The June 26, 2012 NRC IG report "*Possible Violations of the Reorganization Plan No. 1 of 1980 and NRC's Internal Commission Procedures by NRC Chairman*" (2012 IG Report) states:

"President Carter said that the Chairman has a functional duty under the Reorganization Plan to declare emergency authority, and if he enacted emergency authority without a declaration, he would have been in violation of the Reorganization Plan. President Carter envisioned a Chairman exercising emergency authority for a specific transient emergency lasting a matter of days, not emergency authority for a matter of months."

- a. Do you agree with President Carter that a Chairman has a functional duty to declare emergency authority? If not, why not?

ANSWER.

Yes, a Chairman who begins exercising emergency authority should declare that he or she is doing so.

- b. How long do you believe a chairman should be allowed to exercise emergency authority?

ANSWER.

A Chairman should be allowed to exercise emergency authority during the pendency of an emergency which has necessitated the declaration, until the circumstances necessitating the declaration are relieved or ameliorated. I believe this to be consistent with President Carter's statement, which I interpret to correspond, in general terms, to the United States' national response framework, which envisions a stepwise restoration of governance norms, as an emergency stabilizes and is brought under control.

QUESTION 4.

The 2012 IG report states: "*President Carter stated it would have been inappropriate for the Chairman to exercise emergency authority for a nuclear incident in Japan. Absent a domestic emergency, the authority lies with the full Commission and any review of the nuclear incident in Japan should have been in the hands of the Commission.*"

Do you believe the use of emergency authority for foreign events is warranted? Why or why not?

ANSWER:

In general, an NRC Chairman's use of emergency authority should be limited to events and actions under the legal span of regulatory authority of the NRC. Although the NRC as an agency may be called upon to provide its expert consultation and advice in response to, for example, a nuclear emergency in a bordering country with cross border effects, based upon my understanding of our current national response framework, the NRC Chairman would not direct the response to such an event for the U.S. government as a whole.

QUESTION 5.

During an emergency, the chairman or a designee acts as the Executive Team Director. NRC briefing materials list the Executive Team Director's key responsibilities for an activated operations center as the following:

- *"Receive initial and periodic briefings on the nature and progression of the incident"*
- *"Ensure other Commissioners are kept informed"*
- *"Manage external interface (Federal agencies, White House, States, Congressional officials, State Department, IAEA, tribal organizations)"*
- *"Call to Governor's designee and DHS Secretary"*
- *"Review and approve Situation Report (SITREP) and Press Releases"*
- *"Determine if Site Team (expanded activation mode) is necessary"*
- *"Prepare/Act as agency spokesperson for news center and interagency events (e.g. WH briefings)"*

Please explain whether you think the inclusion of an emergency declaration would be burdensome considering these key responsibilities already exist and procedures have been established for managing necessary communications.

ANSWER:

I do not believe such a notification need be burdensome. As noted in the question, the Executive Team and Operations Center provide a Chairman leading a response with extensive resources and support.

QUESTION 6. The 2012 IG Report states:

"Several officials commented that NRC has no procedures to follow for the Chairman to assert his emergency authority."

Do you believe the NRC should have a procedure that clearly articulates the circumstances or actions that would require a chairman to exercise emergency authority and describes the process for doing so?

- a. If so, please describe what you believe should be included in such a procedure.
- b. If not, why not?

ANSWER.

Clear and understandable procedures are important to emergency preparedness and response. The Commission now has under deliberation a revision to its internal procedures to conform the procedures to the provision enacted by Congress in the Consolidated Appropriations Act, 2014, Pub. L. No. 113-76, § 402, 128 Stat. 5, 182-183 (2014), requiring the NRC Chairman to provide notification to the Commission and Congress within one day after beginning to exercise emergency authority. This procedure will be posted to the agency's website when revisions are complete.

QUESTION 7. According to NRC briefing materials, licensees are required to notify the NRC of an event within 15 minutes. The NRC then expects to notify - within one hour - EPA, DOE, DHS, HHS, USDA, and FEMA. For what length of time do you believe a chairman should be allowed to unilaterally exercise the power of the full commission before notifying the public, the Congress, and fellow commissioners?**ANSWER.**

Under the provision enacted by Congress in the Consolidated Appropriations Act, 2014, Pub. L. No. 113-76, § 402, 128 Stat. 5, 182-183 (2014), the NRC Chairman will provide notification to the Commission and Congress within one day after beginning to exercise emergency authority. Given the extensive resources available to a Chairman responding to an emergency from both the Executive Team and the Operations Center, this notification need not be burdensome and could likely be completed well before the 24 hours expire.

QUESTION 8. The Office of Public Affairs leads one of the teams staffing the operations center during an emergency. Wouldn't this be an appropriate and efficient manner to notify the public in the event a chairman decides to exercise emergency authority? If not, why not?**ANSWER.**

Yes, during an emergency, the Office of Public Affairs would be involved in the process of notifying the public about the emergency, under the Chairman's direction.

QUESTION 9.

One of the chairman's responsibilities as the Executive Team Director is to keep the commissioners informed. Do you believe the procedures in place to meet that responsibility would be adequate to notify fellow commissioners in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER.

The Commission now has under deliberation a revision to its internal procedures to conform the procedures to the provision enacted by Congress in the Consolidated Appropriations Act, 2014, Pub. L. No. 113-76, § 402, 128 Stat. 5, 182-183 (2014), requiring the NRC Chairman to provide notification to the Commission and Congress within one day after beginning to exercise emergency authority. This procedure will be posted to the agency's website when revisions are complete. The NRC Operations Center already has procedures in place to keep each Commissioner office notified of significant events on a continuous basis. Such notifications generally occur well within 24 hours of an event and there should be no reason similar notifications could not be made directly to the Commissioners should the Chairman determine that there is a need to exercise emergency authority.

QUESTION 10.

The Office of Congressional Affairs participates on one of the teams staffing the operations center during an emergency. Do you believe this to be an appropriate and efficient manner to notify Congressional officials in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER.

The new Appropriations Act requires notification to Congress within one day after the Chairman commences exercise of emergency authority. The Office of Congressional Affairs would likely be involved in the process of complying with this requirement.

QUESTION 11.

NRC's procedures reference communications that are pre-planned. Do you believe developing preplanned notifications of a chairman's decision to exercise emergency authority might be an effective way to ensure the timeliness and efficiency of such notifications? If not, why not?

ANSWER.

Pre-planned notifications would be an efficient option to ensure timeliness and efficiency of notifications.

QUESTION 12. In the hearing, Chairman Macfarlane testified that the agency's budget is developed by NRC staff. Section 201 of the Energy Reorganization Act of 1974 states:

"Each member of the Commission, including the Chairman, shall have equal responsibility and authority in all decisions and actions of the Commission, shall have full access to all information relating to the performance of his duties or responsibilities, and shall have one vote."

The prior NRC chairman asserted budget authority to unilaterally close down the legally-mandated review of the Yucca Mountain repository license application. Since the budget is a major instrument of policymaking, which is the purview of the Commission, please describe whether you believe the Chairman should be allowed to influence budget development prior to consideration by the full Commission.

ANSWER.

As a practical matter, the Commission must have a common base text to review, deliberate, and vote on, in order to advance the timely and efficient formulation of an agency budget. Historically, this base text has come in the form of a Chairman's budget proposal which is subsequently reviewed and voted on by the other four members of the Commission. At bottom, however, a budget proposal developed by the agency's senior career leadership and delivered to all five members of the Commission for review and approval would serve the same purpose and would arguably be no different than the host of other administrative proposals, including budget adjustments, the Commission receives from the staff and votes on over the course of the year. The core principle to be preserved in the budget development process is the principle that each member "shall have one vote." I have concerns about any process which would permit Chairmen to vote on their own budget proposals (which come in the form of a COM and therefore constitute a vote under Commission procedure). This would seem, while perhaps not technically improper, to offend the spirit of "one member, one vote."

QUESTION 13.

Section 201 of the Energy Reorganization Act of 1974 states: "*In carrying out any of his functions under the provisions of this section the Chairman shall be governed by general policies of the Commission and by such regulatory decisions, findings, and determinations as the Commission may by law be authorized to make.*"

Section 2 of the Reorganization Plan of the 1980 states:

"The Chairman as principal executive officer and the Executive Director for Operations shall be governed by the general policies of the Commission and by such regulatory decisions, findings, and determinations, including those for reorganization proposals, budget revisions, and distribution of appropriated funds, as the Commission may by law, including this plan, be authorized to make."

If a majority of the Commission believes that the Chairman is failing to operate in accordance with internal commission procedures, what action do you think commissioners should take? Do you believe legislation authorizing such action would provide clarity to such a situation?

ANSWER.

Commissioners should take an appropriate and measured response that they believe has the best chance of resolving the issue, based on the facts at hand. The effort of any deliberative group to work in collegial accord with one another is a fragile endeavor, even in the best of times. It has been my observation that Commissioners approach their obligations to the agency, to the Nation, and to the integrity of their public office in a grave and solemn manner. While they may struggle for a time and deliberate among themselves in arriving at what they believe to be the most appropriate mechanism and degree of response to a disagreement with their Chairman, it may nevertheless be most beneficial to preserve their freedom to act in accordance with the facts of any specific matter, as it arises, without legislating specific responses.

QUESTION 14.

The NRC Inspector General issued a report "NRC Chairman's Unilateral Decision to Terminate NRC's Review of DOE Yucca Mountain Repository License Application" on June 6, 2011 (2011 OIG Report):

"OIG reviewed the Commissioners' voting process associated with SECY-10-0102 and learned that the Internal Commission Procedures were not followed relative to voting deadlines, extension requests, or polling of other Commissioners to determine whether they agree with extension requests."

And:

"Although the notational voting process associated with SECY-10-0102 was complete as of October 29, 2010, as of the date of this report the Commission has not held an affirmation vote on the matter and the draft order continues to sit in deliberation before the Commission for affirmation."

- a. Please indicate how long you believe a chairman or commissioner should be allowed to prevent an adjudicatory decision from being finalized.
- b. Please describe what you believe would be the best mechanism to ensure Internal Commission Procedures are enforced.
- c. Please provide any other resolution to such a situation that you believe would be effective at ensuring adjudicatory decisions are not unnecessarily delayed.

ANSWER.

The Commission seeks to provide meaningful hearing opportunities to the public, while at the same time providing license applicants a prompt resolution of adjudicatory disputes concerning their applications. The time needed for the Commission's consideration and resolution of an adjudicatory matter will vary and will be informed by a number of factors, including the nature of the legal, factual, and/or policy issues that must be decided. These issues may vary in number and in legal and technical complexity. With this in mind, the Commission's rules of procedure in 10 C.F.R. Part 2 provide broad latitude for the Commission to take action as a collegial body in individual proceedings, to ensure prompt and effective resolution of matters set for adjudication.

As to the Commission's internal decision-making process, the Internal Commission Procedures provide that Commissioners' votes on Commission papers – including adjudicatory papers – are normally requested in 10 business days. The procedures further provide that approval of extensions of time to vote on an adjudicatory paper must be given by a Commission majority. Once voting is complete on an adjudicatory paper, the NRC adjudicatory staff will submit the draft final order to establish a majority position on the decision. Commissioners at that time have an opportunity to make changes to the order and/or circulate additional or dissenting views. As soon as a majority position on the decision has been established, the Secretary of the Commission will poll the Commission on scheduling the affirmation of the decision, and an affirmation will then be scheduled to obtain a formal vote of the Commission. In sum, the procedures provide a comprehensive, clear process to guide Commission action on adjudicatory matters, and each adjudication is different. The Commission continues to work collegially, taking into account all Commission priorities, to ensure the issuance of reasoned, thoughtful decisions based on informed adjudicatory records, consistent with the Commission's stated goal of achieving prompt resolution of adjudicatory disputes.

QUESTION 15. Please describe any unintended consequences you believe H.R. 3132 presents. For each postulated consequence please provide legislative language you believe would adequately mitigate it.

ANSWER.
I have no other general considerations regarding H.R. 3132 to submit at this time.

QUESTION 16. Please provide any other opinions you believe may further inform the Committee's consideration of H.R. 3132.

ANSWER.
I have no other opinions on H.R. 3132 to convey at this time.

Question from Representative Cathy CastorQUESTION 1.

During the hearing, I raised the issue of official international travel by the Commissioners. As I requested during the hearing, please provide an explanation of why your international travel is worth the expense and time away from your responsibilities at the Commission.

ANSWER.

International activities are an integral part of the NRC's work and are managed in a manner consistent with the NRC's domestic organizational and programmatic priorities. The Commission's foreign travel is a reflection of the importance of engagement with international counterparts to advance the goals of nuclear safety and security shared by the United States and many other countries around the world. In addition, Commissioners collaborate with regulatory authorities of other nations regarding NRC's authority for import and export approvals for nuclear materials and equipment, coordinate on safeguards and nonproliferation matters, and carry out the body of work necessary to support the United States' obligations as a party to certain international conventions and treaties.

In the last fifteen years, several events have significantly changed the landscape within which NRC conducts its domestic and international activities. These events include the terrorist attacks of September 11, 2001, and the subsequent focus on securing radioactive materials of concern; the restart of new build for commercial power plants in the United States and abroad, including the significant number of "new entrant" countries seeking nuclear power programs; and the March 2011 Fukushima-Daiichi accident following the Tōhoku earthquake and tsunami. In addition, the manufacture of nuclear parts and the provision of nuclear services have been significantly reduced in the United States for domestic nuclear power plant construction and servicing, which has created a dependence on the global marketplace among U.S. nuclear power plant owners/operators.

A part of this trend has been the increased visibility of international standards and international peer reviews, as well as a focus on strengthening and harmonizing the international import-export regime. The Commission is best able to influence, and learn from, these international developments by traveling internationally and bringing to bear insights gained from international activities. The advancement of these priorities by Commissioners themselves often results in greater responsiveness and higher levels of participation by the government of the country being visited. While the NRC is an independent agency, it is still the expert voice on nuclear safety and security regulation for the United States. For that reason, Commissioner participation in international fora is frequently encouraged by NRC's counterparts in the U.S. Departments of State and Energy, as well as by U.S. diplomats and representatives in-country, for the purpose of advancing these goals.

While on international travel, Commissioners make use of communications technology to continue to conduct their domestic responsibilities by staying in touch with colleagues and staff. The Commission's procedures also allow for voting remotely. Consequently, the Commission's work need not be interrupted while a member is absent.

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS
Congress of the United States
House of Representatives

COMMITTEE ON ENERGY AND COMMERCE

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January 15, 2014

The Honorable George Apostolakis
Commissioner
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Commissioner Apostolakis:

Thank you for appearing before the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy on Thursday, December 12, 2013, to testify at the hearing entitled "Oversight of NRC Management and the Need for Legislative Reform."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Wednesday, January 29, 2014. Your responses should be e-mailed to the Legislative Clerk in Word format at Nick.Abraham@mail.house.gov and mailed to Nick Abraham, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

Ed Whitfield
Chairman
Subcommittee on Energy and Power

John Shimkus
Chairman
Subcommittee on Environment
and the Economy

cc: The Honorable Bobby L. Rush, Ranking Member, Subcommittee on Energy and Power
The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment



COMMISSIONER

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

February 12, 2014

The Honorable Ed Whitfield

Chairman, Subcommittee on Energy and Power
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515-6115

The Honorable John Shimkus
Chairman, Subcommittee on Environment
and the Economy
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515-6115

Attn: Mr. Nick Abraham

Dear Chairmen Whitfield and Shimkus:

In response to your letter of January 15, 2014, please find enclosed my answers to the questions for the December 12, 2013 hearing record. These answers include sensitive non-public information. Therefore, it is requested that they be held in confidence with access limited to the Committee and its staff.

Please contact me with any questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read "George Apostolakis".

George Apostolakis

Enclosures: as stated

cc: The Honorable Bobby L. Rush
The Honorable Paul Tonko

Attachment 1 – Commissioner Apostolakis'
Responses to Additional Questions for the Record

The Honorable Ed Whitfield

1. According to the NRC staff's FY 2012 report on adverse trends in the industry's safety performance: "...the staff identified no statistically significant adverse trends in industry safety performance." In fact, a closer inspection of the long-term trend graphs in that report show that the industry is improving safety in 10 out of the 14 graphs. The staff indicated the remaining four: "...did not have a statistically significant trend." However, the nuclear reactor safety budget has grown 48% over the last ten years even though the number of licensing actions and tasks has decreased 40%. Four reactors permanently shut down last year, another one will this year, and reports persist that others may also.
 - a. Please describe what actions you believe the Commission should take to ensure the budget is commensurate with a decreased workload, a shrinking fleet, and improving industry safety performance.

ANSWER: Although the number of active new reactor applications before the NRC has decreased in recent years, there has been a significant increase in the NRC's workload in other areas, most notably, in our response to the accident at Fukushima Daiichi, in our work reviewing fire protection license amendments, and in our work related to Waste Confidence. In addition, although the number of operating power reactors is decreasing, there will still be a great deal of NRC work associated with recently closed plants as they undergo decommissioning.

Nevertheless, I am committed to ensuring that future NRC budgets are commensurate with our workload. The Commission has a number of opportunities to ensure resource requests are commensurate with workload. On an annual basis, the Commission reviews the baseline budget and adjusts resource allocations based on several factors, including letters of intent from current and prospective licensees, changes in regulatory requirements, and prior year expenditures. In the year of budget execution, the agency works to adjust resources commensurate with the level of work actually received. The agency will begin to develop the FY2016 budget in the coming months using updated assumptions about operating plants, new reactor applications, and other indicators of the projected workload.

It is worth noting that, as of November 16, 2013, the NRC has 3871 staff (including the Office of the Inspector General) which is down 368 employees from FY2010. The NRC has been engaged in efforts to streamline the organization and should continue to do so.

- b. Please describe any recommendations you believe would improve the prioritization and application of resources to matters that are safety significant.

ANSWER: The agency continues to consider ways to further risk-inform our regulatory activities which would support enhanced prioritization based on safety and security significance. For example, in early 2013, the Commission directed the NRC staff to develop approaches for allowing licensees to propose prioritization of the implementation of regulatory actions as an integrated set and in a way that reflects their risk significance on a plant-specific basis. The staff has been interacting with stakeholders and is developing options for Commission action.

The Honorable John Shimkus

- 1. Given the DC Circuit Court of Appeals reaffirmed the NRC's obligation under the Nuclear Waste Policy Act to review the Yucca Mountain license application, do you as an individual commissioner believe it is incumbent upon the NRC to request the funding necessary to complete the license review?**

ANSWER: I am recused from the Yucca Mountain adjudicatory proceeding and have not been participating in the agency's decisions on how to respond to the court's remand and direction. Thus, I have not formed a position on this question.

- 2. Do you as an individual commissioner believe the NRC should propose a supplemental budget request to the Office of Management and Budget to support full resumption of the license review? If not, why not?**

ANSWER: I am recused from the Yucca Mountain adjudicatory proceeding and have not been participating in the agency's decisions on how to respond to the court's remand and direction. Thus, I have not formed a position on this question.

- 3. If the Commission fails to request funding for completing the Yucca Mountain licensing process, do you as an individual commissioner believe that would weaken the basis for Waste Confidence findings?**

ANSWER: I am recused from the Yucca Mountain adjudicatory proceeding and have not been participating in the agency's decisions on how to respond to the court's remand and direction. Thus, I have not formed a position on this question.

- 4. Given the fact that the NRC routinely issues draft SERs during other license reviews and later revises them, do you as an individual commissioner believe the Commission should utilize the same approach on the Yucca Mountain license review for the sake of transparency? If not, why not?**

ANSWER: I am recused from the Yucca Mountain adjudicatory proceeding and have not been participating in the agency's decisions on how to respond to the court's remand and direction. Thus, I have not formed a position on this question.

- 5. Recently, the NRC staff provided a 400-page report to the Commission: "Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor." The cover memo for that report states:**

"This study shows the likelihood of a radiological release from the spent fuel after the analyzed severe earthquake at the reference plant to be very low (about 1 time in 10 million years or lower)."

The staff has provided the Commission with a 200-page report entitled *"Staff Evaluation and Recommendation for Japan Lessons-Learned Tier 3 Issue on Expedited Transfer of Spent Fuel"*. In this report, the staff concluded that:

- *"The costs of expedited transfer of spent fuel to dry cask storage outweigh the benefits";*
- *"Additional studies are not needed"; and*
- *"No further regulatory action is recommended for the resolution of this issue and this Tier 3 item should be closed".*

- a. As an individual commissioner, do you have any reason to doubt the NRC staff's competence in this regard?

ANSWER: No. I might add that, although there are varying views on whether the conclusions of the report are well supported, the NRC's Advisory Committee on Reactor Safeguards, a statutory committee that advises the Commission with regard to reactor safety issues, commented on the staff's work in a letter dated December 18, 2013. The Committee concluded, among other things:

1. The staff's safety goal screening analysis has adequately evaluated the safety benefits of expedited transfer from spent fuel pools (SFPs) to dry cask storage systems (DCSSs).
2. The safety goal screening evaluation has demonstrated that the NRC Safety Goal Policy and Quantitative Health Objectives (QHOs) are met with orders of magnitude margin for both current high-density SFP loadings and proposed low-density fuel loadings. Based on these results, the staff has concluded that there is insufficient safety benefit to justify the expedited transfer of spent fuel from U.S. pools to DCSSs. We agree with this conclusion.

The Honorable Joe Barton

1. In November 2013, NRC released a report entitled "A comparison of U.S. and Japanese regulatory requirements in effect at the time of the Fukushima accident."

- a. Do you support all of the findings of the staff report?

ANSWER: I have no basis to disagree with the findings. The findings appear to be sound.

- b. The authors of the report acknowledge that the staff's comparison was not an exhaustive review. Do you think it is appropriate for the Commission to consider revising the NRC's regulatory framework without having an exhaustive review as a solid basis for such a revision?

ANSWER: In my view, the Commission acted appropriately in the instances where it has considered and approved new requirements based on lessons learned from the Fukushima accident. Following the accident, the NRC focused on the course of events leading up to, during, and after the Fukushima accident and established a task force to conduct a systematic and methodical review of NRC processes and regulations to determine whether the agency should make additional improvements to its regulatory system in light of that accident. As an example, the mitigating strategies implemented at U.S. plants following the terrorist attacks of September 11, 2001, to cope with large fires and explosions might have helped in responding to an extended loss of electrical power and core cooling capability such as that which occurred at Fukushima. However, this equipment was not designed or required to handle multi-unit events or survive extreme natural phenomena, such as a beyond design basis flood.

Upon identifying these limitations, the NRC's response was to issue orders to U.S. plants to install additional portable power supplies and pumps that would be protected from extreme natural phenomena to ensure that equipment would be available to cool the reactors if all electrical power is lost, no matter what causes the loss of power. This new requirement is a result of one of the most safety significant lessons to be learned from the Fukushima accident, and it was identified by reviewing the event itself, rather than studying the differences in the U.S. and Japanese regulations. The staff's efforts to identify and implement the remaining Fukushima lessons learned follow a similar methodology.

The staff's November 2013 assessment identified the difficulties in fully comparing Japanese and U.S. regulatory requirements and did not alter the NRC's view that appropriate actions should be identified by focusing on U.S. plants and potential improvements to address beyond design basis events. The comparisons of U.S. and Japanese regulations in effect at the time of the accident has not identified new issues or resulted in the NRC revising its planned regulatory improvements to U.S. nuclear power plants. The NRC staff has had extensive discussions with other foreign national regulators, including the Japanese Nuclear Regulation Authority, to compare lessons learned and implementation strategies for improvements to plant designs and operations. These discussions have informed the NRC's effort.

c. What differences between U.S. and Japanese regulatory framework were left out of the final report? Why were they not deemed to merit further analysis?

The comparison did not assess differences in administrative requirements, plant licensing or license amendment processes, reporting and inspection programs, or technical areas unrelated to the sequence of events at Fukushima. Examples of technical areas that were not directly related to the sequence of events and therefore not included in the comparison are fire protection, security, and design basis accidents (e.g., losses of heat removal or inventory with AC power available).

Given the resource implications of a detailed comparison and the availability of insights from a variety of Japanese and international reviews, the NRC's

comparison appropriately focused on those areas most relevant to the sequence of events and accident mitigation capabilities at Fukushima.

The Honorable Lee Terry

1. Prior to this hearing did Chairman Macfarlane inform you of her intention to declare her opposition to H.R. 3132?

ANSWER: The Chairman had informed me that she opposed the bill.

2. Do you support or oppose the policy goals of HR 3132? Would you be willing to work with staff to perfect it?

ANSWER: I agree with the goals of some parts of the legislation. I would be willing to support efforts to address issues or areas of concern.

3. The June 26, 2012 NRC IG Report "*Possible Violations of the Reorganization Plan No. 1 of 1980 and NRC's Internal Commission Procedures by NRC Chairman*" (2012 IG Report) states:

"President Carter said that the Chairman has a functional duty under the Reorganization Plan to declare emergency authority, and if he enacted emergency authority without a declaration, he would have been in violation of the Reorganization Plan. President Carter envisioned a Chairman exercising emergency authority for a specific transient emergency lasting a matter of days, not emergency authority for a matter of months."

- a. Do you agree with President Carter that a chairman has a functional duty to declare emergency authority? If not, why not?

ANSWER: I agree with President Carter that a chairman should declare emergency authority if exercising the emergency authority. Section 3 of Reorganization Plan No. 1 of 1980 does not explicitly address when or how a Chairman must or should exercise the authority to make a declaration apart from the reference to the transfer of "all the functions vested in the Commission pertaining to an emergency concerning a particular facility or materials licensed or regulated by the Commission . . ." However, a provision of the new Appropriations Act requires that an NRC Chairman provide notification to the Commission and Congress within one day after beginning to exercise emergency authority.

- b. How long do you believe a chairman should be allowed to exercise emergency authority?

ANSWER: Thirty days, although somewhat arbitrary, seems like a reasonable time. However, circumstances would vary, so a mechanism for extension would be necessary.

4. The 2012 IG Report states:

"President Carter stated it would have been inappropriate for the Chairman to exercise emergency authority for a nuclear incident in Japan. Absent a domestic emergency, the authority lies with the full Commission and any review of the nuclear incident in Japan should have been in the hands of the Commission."

Do you believe the use of emergency authority for foreign events is warranted?
Why or why not?

ANSWER: Generally not, but it is difficult to address all possible circumstances. An NRC chairman may exercise normal authority as official spokesman and principal executive officer in circumstances not involving an NRC licensee. Also, other Federal agencies may have a lead role in the event of an emergency originating in another country.

5. During an emergency, the chairman or a designee acts as the Executive Team Director. NRC briefing materials list the Executive Team Director's key responsibilities for an activated operations center as the following:

- *"Receive initial and periodic briefings on the nature and progression of the incident"*
- *"Ensure other Commissioners are kept informed"*
- *"Manage external interface (Federal agencies, White House, States, Congressional officials, State Department, IAEA, tribal organizations)"*
- *"Call to Governor's designee and DHS Secretary"*
- *"Review and approve Situation Report (SITREP) and Press Releases"*
- *"Determine if Site Team (expanded activation mode) is necessary"*
- *"Prepare/Act as agency spokesperson for news center and interagency events (e.g. WH briefings)"*

Please explain whether you think the inclusion of an emergency declaration would be burdensome considering these key responsibilities already exist and procedures have been established for managing necessary communications.

ANSWER: No, it should not be burdensome if the Chairman or designee has made a determination of such an emergency.

6. The 2012 IG Report states:

"Several officials commented that NRC has no procedures to follow for the Chairman to assert his emergency authority."

Do you believe the NRC should have a procedure that clearly articulates the circumstances or actions that would require a chairman to exercise emergency authority and describes the process for doing so?

- a. If so, please describe what you believe should be included in such a procedure.

b. If not, why not?

ANSWER: It would be difficult to articulate all circumstances under which a chairman would need to exercise emergency authority. In addition, a strict list of such circumstances could unnecessarily constrain a chairman's decision making. The new Appropriations Act includes requirements relating to the exercise of emergency powers. A more detailed process might not be optimal for all circumstances.

7. According to NRC briefing materials, licensees are required to notify the NRC of an event within 15 minutes. The NRC then expects to notify-within one hour-EPA, DOE, DHS, HHS, USDA, and FEMA. For what length of time do you believe a chairman should be allowed to unilaterally exercise the power of the full commission before notifying the public, the Congress, and fellow commissioners?

ANSWER: Notification within 24 hours is a reasonable expectation and is now a legal requirement under the recent Appropriations Act. In practice, I expect that an NRC Chairman will provide notice in the future as soon as reasonably possible in advance of 24 hours.

8. The Office of Public Affairs leads one of the teams staffing the operations center during an emergency. Wouldn't this be an appropriate and efficient manner to notify the public in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER: Yes.

9. One of the chairman's responsibilities as the Executive Team Director is to keep the commissioners informed. Do you believe the procedures in place to meet that responsibility would be adequate to notify fellow commissioners in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER: I anticipate that the Chairman or a designee would carry out the requirements of the new Appropriations Act whatever procedures are in place. It is not clear that new procedures are necessary but the question is likely to be considered further. There are a number of ways in which a Chairman could accomplish notification of fellow Commissioners and others.

10. The Office of Congressional Affairs participates on one of the teams staffing the operations center during an emergency. Do you believe this be an appropriate and efficient manner to notify Congressional officials in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER: Yes.

11. NRC's procedures reference communications that are pre-planned. Do you believe developing preplanned notifications of a chairman's decision to exercise emergency authority might be an effective way to ensure the timeliness and efficiency of such notifications? If not, why not?

ANSWER: Yes.

12. In the hearing, Chairman Macfarlane testified that the agency's budget is developed by NRC staff. Section 201 of the Energy Reorganization Act of 1974 states:

"Each Member of the Commission, including the Chairman, shall have equal responsibility and authority in all decisions and actions of the Commission, shall have full access to all information relating to the performance of his duties or responsibilities, and shall have one vote."

The prior NRC chairman asserted budget authority to unilaterally close down the legally-mandated review of the Yucca Mountain repository license application. Since the budget is a major instrument of policymaking, which is the purview of the Commission, please describe whether you believe the Chairman should be allowed to influence budget development prior to consideration by the full commission.

ANSWER: Yes. Under the current law, the Chairman shall present the budget estimate to the Commission for its consideration. The preparation of the budget estimate shall be delegated to the Executive Director for Operations, subject to the Chairman's direction and supervision. In my view, this is appropriate. However, the Commission should also have access to staff views and information pertaining to the development of the Chairman's proposed budget when the Commission reviews the Chairman's proposed budget.

The initial step in the process at the Commission level is for the Chairman to provide high-level planning objectives for budget development and prioritization of planned activities to the Commission for review and approval. Based on the high-level planning objectives, the Executive Director for Operations and the Chief Financial Officer submit to the Chairman a budget with their workload estimates, resource requirements and narrative justifications. The Chairman reviews the senior management budget input and submits his or her decisions to the Commission for review, analysis and approval through the Commission voting process.

13. Section 201 of the Energy Reorganization Act of 1974 states:

"In carrying out any of his functions under the provisions of this section the Chairman shall be governed by general policies of the Commission and by such regulatory decisions, findings, and determinations as the Commission may by law be authorized to make."

Section 2 of the Reorganization Plan of 1980 states:

"The Chairman as principal executive officer and the Executive Director for Operations shall be governed by the general policies of the Commission and by such regulatory decisions, findings, and determinations, including those for reorganization proposals, budget revisions and distribution of appropriated funds, as the Commission may by law, including this Plan, be authorized to make."

If a majority of the Commission believes that the Chairman is failing to operate in accordance with the internal commission procedures, what action do you

think commissioners should take? Do you believe legislation authorizing such action would provide clarity to such a situation?

ANSWER: Commissioners should make every effort to address this matter directly with the Chairman. In my view, legislation on this matter is not necessary and could undermine collegiality. Matters of this sort are best resolved within the Commission.

14. The NRC Inspector General issued a report “*NRC Chairman’s Unilateral Decision to Terminate NRCs Review of DOE Yucca Mountain Repository License Application*” on June 6, 2011 (2011 OIG Report):

“OIG reviewed the Commissioners’ voting process associated with SECY-10-0102 and learned that the Internal Commission Procedures were not followed relative to voting deadline, extension requests, or polling of other Commissioners to determine whether they agree with extension requests.”

And:

“Although the notational voting process associated with SECY-10-0102 was complete as of October 29, 2010, as of the date of this report the Commission has not held an affirmation vote on the matter and the draft order continues to sit in deliberation before the Commission for affirmation.”

a. Please indicate how long you believe a chairman or commissioner should be allowed to prevent an adjudicatory decision from being finalized.

ANSWER: An individual commissioner or a chairman should not prevent an adjudicatory decision from being finalized if a majority of the commission has determined that a reasonable period for deliberation has been exhausted. In such cases, an adjudicatory decision should be finalized promptly. However, cases may vary considerably in their complexity and the amount of time necessary to reach a well-supported and well-articulated resolution. The current Internal Commission Procedures provide reasonable general deadlines and a reasonable process for extensions and consideration of differing views in arriving at a final position.

b. Please describe what you believe would be the best mechanism to ensure Internal Commission Procedures are enforced.

ANSWER: Specific adjudicatory cases vary in the time required for completion. In general, the existing procedures provide good mechanisms for finalizing adjudicatory voting matters. For instance, requests for an extension of the voting time for an adjudicatory paper or a delay in an affirmation in the vote on a matter may be granted only by a majority of the Commission.

c. Please provide any other resolution to such a situation that you believe would be effective at ensuring adjudicatory decisions are not unnecessarily delayed.

ANSWER: Legislative solutions would be one possibility but an inflexible deadline could affect the quality of the Commission's decision making.

15. Please describe any unintended consequences you believe H.R. 3132 presents. For each postulated consequence, please provide legislative language you believe would adequately mitigate it.

ANSWER: An effort to describe or estimate unintended consequences is likely to involve a large element of uncertainty. As a general matter, the Commission is currently working well in accomplishing its responsibilities in a collegial manner, and more detailed legislative directives, including requirements that the Commission promptly establish more detailed procedures in several areas, may unnecessarily affect collegiality and constrain the avenues for collegial resolution of issues.

In my view, reasonable concerns about the potential for unintended consequences are associated with a number of the proposals. For example, limiting or eliminating a Chairman's responsibility to present to the Commission budget estimates and proposals for the distribution of appropriated funds may adversely affect the timeliness of the submission of proposed budgets and limit the broad agency-wide perspectives that a Chairman can provide.

Another area of concern relates to some of the proposals regarding emergency powers. These include the proposed requirement that, "To the extent practicable, the Chairman shall consult with the full Commission on any regulatory or policy actions taken under an emergency" and the proposed requirement that the Commission shall establish procedures relating to the Commission's roles "during an emergency," including "(1) complete access to records and information relating to actions taken during the emergency; (2) complete access to Commission staff involved in the management of the emergency; (3) complete access to the location or locations where decisions are made during the emergency . . ." Such provisions have the potential to limit the Chairman's ability to exercise emergency powers in a fully effective and efficient manner, consistent with lessons learned from Three Mile Island as reflected in the current law. It may also be unduly constraining to provide that the Chairman may only exercise emergency authority in the case of an "imminent threat . . ." Circumstances will vary in whether they allow for a certain determination that a threat is imminent.

16. Please provide any other opinions you believe may further inform the Committee's consideration of H.R. 3132.

ANSWER: I have nothing further to offer at this time.

The Honorable Cathy Castor

- 1. During the hearing, I raised the issue of official international travel by the Commissioners. As I requested during the hearing, please provide an explanation of why your international travel is worth the taxpayer expense and time away from your responsibilities at the Commission.**

ANSWER: International activities are an integral part of the NRC's work. Since the beginning of my tenure on the Commission in 2010, I have strived to execute my duties with the utmost respect for the responsibilities entrusted to me by the President and

Congress. Foreign travel has become an important part of a Commissioner's activities, particularly after the Fukushima accident. I have derived many benefits from my meetings with foreign regulators and technical experts, as well as from site visits to foreign nuclear facilities. Some specific benefits include collaborating with regulatory counterparts on the sharing of nuclear power plant operating experience and considerations for improving regulatory oversight. My overseas travels give me a first-hand appreciation of the many pressing issues that are affecting or will affect nuclear safety and security in the U.S.

I have had the opportunity to visit several international nuclear plant sites. For example, I toured one of the Swiss plants in which a filtered containment venting system had been installed. In addition, I visited the Fukushima Daiichi site last year. Nothing brings home the enormous challenges and complexities facing those dealing with the aftermath of the accident like being there.

The manufacture of nuclear parts and the provision of nuclear services have been significantly reduced in the U.S. for domestic nuclear power plant construction which has created a dependence on the global marketplace among U.S. nuclear power plant owners/operators. I have visited a number of manufacturing and research facilities where work is being done that will be directly applied in the U.S. In addition, my participation in international conferences and bilateral meetings enhances the NRC's influence with nuclear regulatory officials around the world.

While on international travel, I continue to conduct my domestic responsibilities as a Commissioner. I participate in voting on issues before the Commission and regularly interact with my staff via email and conference calls, even if this requires working at non-traditional hours. The Commission's work does not stop while I am away, whether on domestic or foreign travel. I assure you that my priority is on nuclear safety and security in the U.S.

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS
Congress of the United States
House of Representatives

COMMITTEE ON ENERGY AND COMMERCE

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January 15, 2014

The Honorable William D. Magwood, IV
Commissioner
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Commissioner Magwood:

Thank you for appearing before the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy on Thursday, December 12, 2013, to testify at the hearing entitled "Oversight of NRC Management and the Need for Legislative Reform."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Wednesday, January 29, 2014. Your responses should be e-mailed to the Legislative Clerk in Word format at Nick.Abraham@mail.house.gov and mailed to Nick Abraham, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

Ed Whitfield
Chairman
Subcommittee on Energy and Power

John Shimkus
Chairman
Subcommittee on Environment
and the Economy

cc: The Honorable Bobby L. Rush, Ranking Member, Subcommittee on Energy and Power
The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment



COMMISSIONER

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555
February 11, 2014

The Honorable Ed Whitfield
Chairman, Subcommittee on Energy
and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

The Honorable John Shimkus
Chairman, Subcommittee on Environment
and the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Chairman Whitfield and Chairman Shimkus:

Thank you for the opportunity to appear before the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy at the December 12, 2013, hearing entitled "Oversight of NRC Management and the Need for Legislative Reform." By letter dated January 15, 2014, you provided additional questions for the record related to this hearing; my responses to these questions are enclosed.

Please do not hesitate to contact me should you or the members of your subcommittees have any additional questions.

Sincerely,

A handwritten signature in black ink, appearing to read "W.D. Magwood".

William D. Magwood, IV

cc: The Hon. Bobby L. Rush, Ranking Member, Subcommittee on Energy and Power
The Hon. Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Enclosure

Questions from the Honorable Ed Whitfield

1. According to the NRC staff's FY 2012 report on adverse trends in the industry's safety performance: "...*the staff identified no statistically significant adverse trends in industry safety performance.*" In fact, a closer inspection of the long-term trend graphs in that report show that the industry is improving safety in 10 out of the 14 graphs. The staff indicated the remaining four: "...*did not have a statistically significant trend.*" However, the nuclear reactor safety budget has grown 48% over the last ten years even though the number of licensing actions and tasks has decreased 40%. Four reactors permanently shut down last year, another one will this year, and reports persist that others may also.
 - a. Please describe what actions you believe the Commission should take to ensure the budget is commensurate with a decreased workload, a shrinking fleet, and improving industry safety performance.

First, I will note that the safety performance trends you cite are an important and very positive indicator of the operational maturity of most licensees. This is a trend that has been in evidence for more than a decade and reflects the industry's successful efforts to improve performance in many areas. At the same time, we and the industry recognize that excellent performance is, in practice, difficult to maintain over time and some plants that had once been viewed as good performers can develop safety performance issues. Additionally, some plant operators struggle to meet the high performance standards set by their peers. For this reason, NRC's efforts remain essential even as overall performance continues to improve.

In our budget process, my fellow Commissioners and I oversee the agency budget formulation and execution processes to ensure resource requests are commensurate with workload. This oversight includes the annual budget formulation process of developing a two-year projected workload in the Nuclear Reactor Safety and Nuclear Materials and Waste Safety Programs, including the anticipated number of licensees and the number and complexity of anticipated license applications. On an annual basis, the Commission oversees the review of the baseline budget and adjusts resource allocations based on several factors, including letters of intent from current and prospective licensees, changes in regulatory requirements, and prior year expenditures. The year prior to executing the budget, the Commission oversees the review of requested resources and associated workload that was previously requested and adjusts them based on the most current information. Lastly, in the year of budget execution, the agency adjusts resources commensurate with the level of work actually received. The most recent budget that was formulated (FY2015) is based on current assumptions regarding the projected workload for FY2014. The agency will begin to develop the FY2016 budget in the coming months using updated assumptions about operating plants, COL applications, and other indicators of the projected workload.

As of November 16, 2013, the NRC has 3871 staff, including the Office of the Inspector General. This is a decrease of 368 employees from FY2010. The staffing increases in past years, while generally characterized as part of the agency's preparation for increased workload, in reality proved to be an effective preparation for the retirement bow-wave that is now being experienced at the NRC. I expect that staff numbers will continue to decrease through attrition. In addition, the NRC has many efforts ongoing to streamline the organization. For example, the Commission initiated efforts to reduce agency overhead by centralizing and consolidating corporate support functions, an effort which is being implemented through the Transforming Assets into Business Solutions (TABS) initiative. This effort has resulted in a reduction of Office Support FTE of 273 (25%) from FY2011 to FY2015.

- b. Please describe any recommendations you believe would improve the prioritization and application of resources to matters that are safety significant.

In late 2012, Commissioner Apostolakis and I offered a new approach to prioritization in our memo to the Commission entitled "Proposed Initiative to Improve Nuclear Safety and Regulatory Efficiency" (COMGEA-12-0001/COMVDM-12-0002). In our concept, the agency would develop a framework to enable licensees to prioritize regulatory actions on a site-specific basis. I believe such a framework, informed by quantitative assessments of safety, represents a highly promising evolution in nuclear regulation that both focuses resources on the most safety significant matters and increases efficiency for both the agency and our licensees,

The Commission approved a staff effort to explore this approach and the staff has been tasked to develop a proposed path forward for Commission consideration. Both members of the Commission and the staff have engaged industry on this matter and promising steps have and are being taken—including the development of industry-led "tabletop" exercises to explore the implementation of prioritization processes.

Questions from the Honorable John Shimkus

1. Given the DC Circuit Court of Appeals reaffirmed the NRC's obligation under the Nuclear Waste Policy Act to review the Yucca Mountain license application, do you as an individual commissioner believe it is incumbent upon the NRC to request the funding necessary to complete the license review?

The writ of mandamus issued by the Court of Appeals ordered the NRC to promptly continue with the legally mandated licensing process for DOE's high level waste repository construction authorization application for Yucca Mountain unless and until Congress authoritatively says otherwise or there are no appropriated funds remaining. The NRC is complying with that order by using currently appropriated Nuclear Waste Fund money to complete the Safety Evaluation Report, ask DOE to prepare the

Supplemental Environmental Impact Statement and make Licensing Support Network documents publicly available. The current schedule estimate from the staff shows completion of those activities by early CY 2015.

The funds available are not sufficient to complete the license review. The agency does not have a budget quality estimate available of the funds needed to complete the review. I requested that agency legal experts review all applicable law and guidance to consider whether a legal imperative exists which would require the NRC to pursue funding—including appropriations law and the writ of mandamus issued by the Court of Appeals. No such imperative has been identified. As a result, this issue is a policy matter to be considered by the Commission in the context of its normal budgeting process. As such, we must consider whether such a request should be a higher priority than other regulatory work affecting a range of nuclear safety and security issues.

Given the state of the Yucca Mountain review as it exists today, previous budget plans do not provide a defensible basis for a budget request. As an individual Commissioner, I cannot make a decision to request resources until staff presents a general project plan and budget estimate that is reflective of the review as it exists today and as it will exist once work already directed by the Commission is completed. Development of an estimate that takes into account the progress made in the completion of the court ordered activities will allow for an informed budgetary decision process. I anticipate that the Commission will discuss this in detail in the very near future.

2. Do you as an individual commissioner believe the NRC should propose a supplemental budget request to the Office of Management and Budget to support full resumption of the license review? If not, why not?

The staff has developed and is executing the plan developed to comply with the writ of mandamus. The initial steps were focused on assembling the organization of individuals to complete the activities directed by the Commission. This effort requires creating multiple teams of people with previous experience as well as key skills necessary to complete the activities. This work will require the reallocation of considerable agency resources. With the effort to carry-out currently directed work still in a formative stage, staff has not developed any plans or budget estimates to continue the license review beyond what is required by the writ of mandamus. As discussed above, I do not believe the agency can make a defensible request in the absence of such a plan and budget estimate. Once such information is available, the Commission will be in a position to consider a defensible request to continue the licensing process.

3. If the Commission fails to request funding for completing the Yucca Mountain licensing process, do you as an individual commissioner believe that would weaken the basis for Waste Confidence findings?

The “waste confidence” rulemaking that the Commission is undertaking right now seeks to adopt the Commission’s generic assessment of the environmental impact of several scenarios, including the need for continued storage of spent fuel at reactor sites for an indefinite period of time due to continued uncertainty concerning the licensing and construction of a repository. Although the Commission is currently considering comments it has received on the generic environmental impact statement (GEIS) that it has prepared, it is confident not only that it is technologically feasible to license and construct a repository, but also that the final GEIS will adequately address the impacts of continued storage under each of these scenarios, without regard to whether additional funds are sought for the Yucca Mountain licensing process. It was always the agency’s approach that, with the completion of the GEIS, the basis of the NRC’s Waste Confidence findings will be independent of the completion of the Yucca Mountain licensing process. It is my view that this is a superior posture in any case that perhaps should have been adopted long ago.

4. Given the fact that the NRC routinely issues draft SERs during other license reviews and later revises them, do you as an individual commissioner believe the Commission should utilize the same approach on the Yucca Mountain license review for the sake of transparency? If not, why not?

The Commission directed the staff to complete the Safety Evaluation Report (SER) using the approach that was used when work on the SER was suspended—that is, the staff should work on the completion of all remaining volumes concurrently but issue each SER volume upon completion. The Commission noted that release of completed volumes serially will ensure transparency as to the staff’s activities.

This approach is the most expeditious in that it allows the staff to focus the resources appropriately but does not delay public release of any volume.

5. Recently, the NRC staff provided a 400-page report to the Commission: *“Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor.”* The cover memo for that report states:

“This study shows the likelihood of a radiological release from the spent fuel after the analyzed severe earthquake at the reference plant to be very low (about 1 time in 10 million years or lower).”

The staff has provided the Commission with a 200-page report entitled *“Staff Evaluation and Recommendation for Japan Lessons-Learned Tier 3 Issue on Expedited Transfer of Spent Fuel.”* In this report, the staff concluded that:

- “*The costs of expedited transfer of spent fuel to dry cask storage outweigh the benefits*”;
- “*Additional studies are not needed*”; and
- “*No further regulatory action is recommended for the resolution of this issue and this Tier 3 item should be closed.*”

a. As an individual commissioner, do you have any reason to doubt the staff's competence in this regard?

As a general matter, while I may sometimes disagree with the staff's recommendations, I have never had occasion to doubt the competence and professionalism of the staff or the quality of its work. Because the Commission is still finalizing its decision with regard to the staff's recommendations on expedited transfer of spent fuel, I am not able to comment on this specific issue at this time (although my vote, along with the vote of each of my colleagues, will be made public once the decision is finalized). However, whatever decision is reached by the Commission about staff's conclusions and recommendations, it is my view that staff's work on the study reflects the same high degree of competence I have come to expect from the dedicated people of the NRC.

Questions from the Honorable Joe Barton

1. In November 2013, NRC released a report entitled “A comparison of U.S. and Japanese regulatory requirements in effect at the time of the Fukushima accident.”
 - a. Do you support all of the findings of the staff report?

I believe that the staff report represents a thorough examination of the issues the Commission asked staff to address, and I do not take issue with the report's findings. I continue to support the overall conclusion of the Near Term Task Force that U.S. plants are safe and that a sequence of events like those occurring in the Fukushima accident is unlikely to occur in the US and could be mitigated, reducing the likelihood of core damage and radiological releases. As has been noted in other reviews of the Fukushima accident, there are many factors unique to the situation in Japan in early 2011 that contributed to the accident.

While our technologies are very similar, the regulatory and nuclear operations practices in the U.S. and Japan were clearly very different in March 2011. Most importantly, the U.S. made significant changes over the years based on experience. For example, in the aftermath of the accident at the Three Mile Island plant, the United States placed great focus on operational excellence, the training of plant operators, emergency preparedness, and the ongoing effort to learn from operating experience. These changes, along with a variety of specific regulatory changes since TMI have provided additional defense in depth which enhance the ability of U.S. plants to respond to a beyond design basis event.

b. The authors of the report acknowledge that the staff's comparison was not an exhaustive review. Do you think it is appropriate for the Commission to consider revising the NRC's regulatory framework without having an exhaustive review as a solid basis for such a revision?

First, it is important to point out that the staff comparison was not intended to be an exhaustive review. Such a review would be very resource-intensive and require the translation of a significant number of Japanese regulatory documents as well as detailed interviews with Japanese regulatory staff and plant operators. The Commission directed the staff to focus its review on those areas that were most relevant to the sequence of events and accident mitigation capabilities at Fukushima. Within this scope, the staff's review was complete.

While the staff comparison provides interesting and instructive information, it is my view that the response of the NRC and the U.S. industry to the lessons of Fukushima cannot be based entirely upon the specific circumstances and sequence of events that led to the accident in Japan. For example, the lack of a credible earthquake-tsunami threat to U.S. plants should not distract from the lesson from Fukushima that a lack of preparation for all extreme natural events—including threats more common to the U.S. mainland such as floods and powerful storms—can lead to disaster. Nor can we take comfort in the fact that all U.S. nuclear plants were equipped with mobile pumps and power systems after the terrorist attacks of September 11, 2001. This equipment was installed in order to allow plants to cope with large fires and explosions. While Japanese plants did not have this equipment in 2011 and it might have helped in responding to the extended loss of electrical power and core cooling capability that occurred at Fukushima, this equipment was not intended to address multi-unit events or to survive extreme natural phenomena, such as a beyond design basis flood.

Based on the larger lessons of Fukushima, the NRC's response has been to order U.S. plants to install additional portable power supplies and pumps that would survive extreme natural phenomena to ensure that equipment would be available to cool the reactors if all electrical power is lost, no matter what causes the loss of power. My view is that the lessons of Fukushima relate more to the need to equip plants to deal with extreme events. An appropriate response to this lesson need not be based on a comparison of U.S. and Japanese regulatory practices.

c. What differences between U.S. and Japanese regulatory framework were left out of the final report? Why were they not deemed to merit further analysis?

A detailed comparison of the regulatory systems in Japan and the U.S. would require a review of governing legislation and regulations, government oversight, plant specific licenses, technical specifications, and guidance documents prepared by standards developing organizations, regulators, and industry groups. Such a review, in

combination with other factors such as cultural and societal influences, would be necessary to fully understand how the differences between the regulatory systems are actually reflected in differences in plant design and operation.

Given the resource implications of such a major study and the availability of insights from a variety of Japanese and international reviews, the NRC's comparison focused on those areas most relevant to the sequence of events and accident mitigation capabilities at Fukushima. For example, the comparison did not assess differences in administrative requirements, plant licensing or license amendment processes, reporting and inspection programs, or technical areas unrelated to the sequence of events at Fukushima. Nor did the comparison consider technical areas that were not directly related to the sequence of events and therefore not included in the comparison are fire protection, security, and design basis accidents (e.g., losses of heat removal or inventory with AC power available). While a review of these various factors would enhance our understanding of the differences between the U.S. and Japanese systems, it would not assist in the development of a regulatory response to the Fukushima experience.

Questions from the Honorable Lee Terry

1. Prior to this hearing did Chairman Macfarlane inform you of her intention to declare her opposition to H.R. 3132?

At the time of the prior hearing, the Commission as a body had not been asked for official views on H.R. 3132, and no Commission policy regarding the bill had been formulated. Consequently, prior to the hearing, my discussions of the bill with my colleagues, including the Chairman, were rather limited.

2. Do you support or oppose the policy goals of H.R. 3132? Would you be willing to work with staff to perfect it?

I do support the general policy goals of HR 3132, particularly as they relate the necessity of clarifying Commission authorities. That said, there are specific provisions of the bill that I believe would benefit from clarification or revision and others that are not needed. I am always prepared to work with Congress to improve any legislation relevant to the mission and operations of the NRC.

3. The June 26, 2012 NRC IG Report, "*Possible Violations of the Reorganization Plan No. 1 of 1980 and NRC's Internal Commission Procedures by NRC Chairman*" (2012 IG Report) states:

"President Carter said that the Chairman has a functional duty under the Reorganization Plan to declare emergency authority, and if he enacted emergency authority without a declaration, he would have been in violation of the Reorganization Plan. President Carter envisioned a Chairman exercising emergency authority for a specific transient emergency lasting a matter of days, not emergency authority for a matter of months."

- a. Do you agree with President Carter that a chairman has a functional duty to declare emergency authority? If not, why not?

I agree that the Chairman has a duty to notify the rest of the Commission; Congressional and Federal officials; local, state, and tribal officials; and members of the public when an emergency has been declared. Not doing so generates unnecessary confusion and uncertainty that can distract and has distracted the agency during a time of crisis. In any event, it is now a statutory requirement, under the new Appropriations Act, that the NRC Chairman provide notification to the Commission and Congress within one day after beginning to exercise emergency authority.

- b. How long do you believe a chairman should be allowed to exercise emergency authority?

The appropriate length of an emergency declaration will vary based on the specific facts of each situation warranting an exercise of emergency authority. Therefore, I do not believe that the length of an exercise of emergency authority should be limited in advance by statute, regulation, or procedure. However, I believe that a requirement that the Chairman keep the Commission, Congress, and the public informed at regular intervals regarding the progress of the emergency situation will help ensure that emergency authority is applied appropriately.

4. The 2012 IG Report states:

"President Carter stated that it would have been inappropriate for the Chairman to exercise emergency authority for a nuclear incident in Japan. Absent a domestic emergency, the authority lies with the full Commission and any review of the nuclear incident in Japan should have been in the hands of the full Commission."
Do you believe the use of emergency authority for foreign events is warranted?
Why or why not?

In general, it is my opinion that an NRC Chairman should be able to respond appropriately and effectively to a foreign nuclear emergency without needing to use any emergency authority under Section 3 of the Reorganization Plan. The Chairman exercises existing authority as official spokesman and principal executive officer in supervising the agency staff responding to the emergency. It is only when there is a need to establish new policy, issue an order on a matter not delegated to the NRC staff, or perform any other function normally assigned to the Commission, that the Chairman would need to invoke emergency powers in order to resolve the matter herself. For an emergency involving a foreign country, this is less likely to arise. However, it is conceivable that the use of emergency authority for foreign events may be warranted in some situations difficult to anticipate today. As a result, I would be reluctant to categorically exclude overseas events from potential exercises of emergency authority.

While it is debatable whether emergency authority was required during the Fukushima crisis, the Chairman was required to take many unusual actions during the crisis and was required to respond quickly to an evolving situation about which information was limited. As a result, the Commission provided the Chairman its full support to take action as necessary. While this was done without any discussion of the use of emergency authority, it was clearly understood that the Chairman would need considerable latitude to manage the agency's response.

5. During an emergency, the chairman or a designee acts as the Executive Team Director. NRC briefing materials list the Executive Team Director's key responsibilities for an activated operations center as the following:

- *Receive initial and periodic briefings on the nature and progression of the incident*
- *Ensure other Commissioners are kept informed*
- *Manage external interface (Federal agencies, White House, States, Congressional officials, State Department, IAEA, tribal organizations)*
- *Call to Governor's designee and DHS Secretary*
- *Review and approve Situation Report (SITREP) and Press Releases*
- *Determine if Site Team (expanded activation mode) is necessary*
- *Prepare/Act as agency spokesperson for news center and interagency events (e.g. WH briefings)*

Please explain whether you think the inclusion of an emergency declaration would be burdensome considering these key responsibilities already exist and procedures have been established for managing necessary communications.

I do not believe that the inclusion of an emergency declaration would be burdensome, particularly as such a declaration could be prepared in advance for the signature of the Chairman and could be disseminated by the staff. However, as noted in the answer to question 5 above, it is now a statutory requirement that the NRC Chairman provide notice within one day after beginning to exercise emergency authority.

6. The 2012 IG Report states:

"Several officials commented that NRC has no procedures to follow for the Chairman to assert his emergency authority."

Do you believe the NRC should have a procedure that clearly articulates the circumstances or actions that would require a chairman to exercise emergency authority and describes the process for doing so?

a. If so, please describe what you believe should be included in such a procedure.

I believe there would be benefit to developing general guidelines that describe the very limited circumstances under which an emergency might need to be declared along with a brief process description of what steps to follow and what resources can be relied

upon if such a situation arose. However, I do not believe detailed procedures are appropriate in this case. It might be more appropriate for the Commission to establish a policy statement to describe how and when emergency authority will be applied.

b. If not, why not?

The types of circumstances that would necessitate an exercise of emergency authority are by definition unexpected, rare, and potentially unique. Attempting to strictly define such circumstances in advance of an exercise of emergency authority may inadvertently result in a situation where an event occurs that requires the declaration of an emergency, but the event is excluded from the definition. However, I believe that requiring the Chairman to publicly declare an exercise of emergency authority and to provide periodic updates on the use of emergency authority will help ensure that such powers are exercised appropriately.

7. According to NRC briefing materials, licensees are required to notify the NRC of an event within 15 minutes. The NRC then expects to notify—within one hour—EPA, DOE, DHS, HHS, USDA, and FEMA. For what length of time do you believe a chairman should be allowed to unilaterally exercise the power of the full commission before notifying the public, the Congress, and fellow commissioners?

I believe that it would be appropriate for the Chairman to notify the public, the full Commission, Congress, and other appropriate parties that he or she is exercising emergency powers soon after the event notification is made to the listed Federal agencies. In any event, the Appropriations Act requires Commission notification no later than 24 hours after the start of the emergency.

8. The Office of Public Affairs leads one of the teams staffing the operations center during an emergency. Wouldn't this be an appropriate and efficient manner to notify the public in the event a chairman decides to exercise emergency authority? If not, why not?

Yes, I believe that using the team led by the Office of Public Affairs would be an appropriate and efficient conduit to notify the public in the event a chairman decides to exercise emergency authority.

9. One of the chairman's responsibilities as the Executive Team Director is to keep the commissioners informed. Do you believe the procedures in place to meet that responsibility would be adequate to notify fellow commissioners in the event a chairman decides to exercise emergency authority? If not, why not?

I believe that the current procedures could benefit from clarifying the requirement that the Chairman notify the Commission of the use of emergency powers and provide

periodic updates to the Commission and other appropriate parties regarding the course of the emergency event. The Commission is currently conducting its biannual review of its internal procedures, which will afford the opportunity to make appropriate changes—and will allow the Commission to ensure that its procedures are consistent with the Appropriations Act.

10. The Office of Congressional Affairs participates on one of the teams staffing the operations center during an emergency. Do you believe this to be an appropriate and efficient manner to notify Congressional officials in the event a chairman decides to exercise emergency authority? If not, why not?

Yes, use of the team members from the Office of Congressional Affairs would be an appropriate and efficient conduit to notify Congressional officials in the event a chairman decides to exercise emergency authority.

11. NRC's procedures reference communications that are pre-planned. Do you believe developing preplanned notifications of a chairman's decision to exercise emergency authority might be an effective way to ensure the timeliness and efficiency of such notifications? If not, why not?

Yes, I agree that developing preplanned notifications of a chairman's decision to exercise emergency authority would be an effective way to ensure the timeliness and efficiency of such notifications.

12. In the hearing, Chairman Macfarlane testified that the agency's budget is developed by NRC staff. Section 201 of the Energy Reorganization Act of 1974 states:

"Each member of the Commission, including the Chairman, shall have equal responsibility and authority in all decisions and actions of the Commission, shall have full access to all information relating to the performance of his duties or responsibilities, and shall have one vote."

The prior NRC chairman asserted budget authority to unilaterally close down the legally-mandated review of the Yucca Mountain repository license application. Since the budget is a major instrument of policymaking, which is the purview of the Commission, please describe whether you believe the Chairman should be allowed to influence budget development prior to consideration by the full Commission.

Under the current Commission procedures—which were approved by the entire Commission and were extensively revised in 2011—the Chairman works with staff and formulates a draft final budget that is then transmitted to the rest of the Commission for review and approval. This draft final budget is based upon input from staff offices, and, per our revised procedures, the entire Commission has access to the staff input after the

Chairman submits the draft final budget. Under Chairman Macfarlane, these procedures are working very well and I do not believe that they require any substantive revision at this time.

13. Section 201 of the Energy Reorganization Act of 1974 states:

"In carrying out any of his functions under the provisions of this section the Chairman shall be governed by general policies of the Commission and by such regulatory decisions, findings, and determinations as the Commission may by law be authorized to make."

Section 2 of the Reorganization Plan of the 1980 states:

"The Chairman as principal executive officer and the Executive Director for Operations shall be governed by the general policies of the Commission and by such regulatory decisions, findings, and determinations, including those for reorganization proposals, budget revisions, and distribution of appropriated funds, as the Commission may by law, including this plan, be authorized to make."

If a majority of the Commission believes that the Chairman is failing to operate in accordance with internal commission procedures, what action do you think commissioners should take? Do you believe legislation authorizing such action would provide clarity to such a situation?

The actions the Commission should take in response to the Chairman—or any other Commissioner—who fails to operate in accordance with Internal Commission Procedures and the law may vary based upon the specific circumstances. However, over the course of the agency's history, the Commission has shown that it is willing and able to take appropriate and necessary action if it finds that the Chairman is acting in a manner contrary to the internal procedures or the agency's governing regulations. I do not believe that legislation specifically authorizing actions such as those taken in the past is necessary at this time.

14. The NRC Inspector General issued a report "NRC Chairman's Unilateral Decision to Terminate NRC's Review of DOE Yucca Mountain Repository License Application" on June 6, 2011 (2011 OIG Report):

"OIG reviewed the Commissioners' voting process associated with SECY-10-0102 and learned that the Internal Commission Procedures were not followed relative to voting deadlines, extension requests, or polling of other Commissioners to determine whether they agree with extension requests."

And:

"Although the notational voting process associated with SECY-10-0102 was complete as of October 29, 2010, as of the date of this report the Commission has not held an affirmation vote on the matter and the draft order continues to sit in deliberation before the Commission for affirmation."

a. Please indicate how long you believe a chairman or commissioner should be allowed to prevent an adjudicatory decision from being finalized.

I believe that the only appropriate purpose to delay final affirmation of an adjudicatory order is if one or more Commission offices are still endeavoring in good faith to propose or reconcile edits to the order. As long as the Commissioner or Commissioners proposing the changes are doing so based upon a good faith belief that the proposed changes are necessary to the final order, the process should continue. However, once this process is complete, the final order should be scheduled for affirmation. The Commission's internal procedures allow—if necessary—for Commissioners to participate in affirmation by telephone, and the current Commission has at times utilized this method. Given the allowances the current procedures make to enable a Commissioner who is out of the office to participate in affirmation, absent extraordinary circumstances, no individual Commissioner should delay affirmation.

b. Please describe what you believe would be the best mechanism to ensure Internal Commission Procedures are enforced.

The Internal Commission Procedures (the ICP's) provide that Commissioners' votes on Commission papers – including adjudicatory papers – are normally requested in 10 business days. The ICPs further provide that approval of extensions of time to vote on an adjudicatory paper must be given by a Commission majority. Once voting is complete on an adjudicatory paper, the NRC adjudicatory staff will submit the draft final order to establish a majority position on the decision. Commissioners at that time have an opportunity to make changes to the order and/or incorporate additional views. As soon as a majority position on the decision has been established, the Secretary of the Commission will poll the Commission on scheduling the affirmation of the decision, and an affirmation will then be scheduled to obtain a formal vote of the Commission. These provisions, if followed, are adequate to ensure that timely actions are taken.

c. Please provide any other resolution to such a situation that you believe would be effective at ensuring adjudicatory decisions are not unnecessarily delayed.

The ICPs provide a comprehensive, clear process to guide Commission action on adjudicatory matters. In view of the robust internal procedures already in place, no revisions to the ICPs – or other mechanisms – are needed to ensure that the ICPs are enforced.

**15. Please describe any unintended consequences you believe H.R. 3132 presents.
For each postulated consequence please provide legislative language you believe
would adequately mitigate it.**

I agree with the policy objectives of the bill, and also agree with much of the language of the bill. However, I believe that there are several provisions in the bill that could be clarified:

- Section 101(a) states that “[a]ll members of the Commission shall have full, unfettered, timely, and equal access to information pertaining to its functions.” In contrast, Section 102(c)(2) states that “[t]he Chairman and Executive Director for Operations shall have joint responsibility insuring that the Commission is fully and currently informed about matters within its functions. Because they include slightly different language, these two provisions could be read as conflicting. The language in Section 102(c)(2) is closest to current language in the Commission’s internal procedures. The meaning of this language is well understood by the Commission and the staff. Therefore, I recommend using the following wording in Section 101(a): “All members of the Commission shall have the right to full and current information about matters within its functions.”
- Section 101(a)(4) states that the Commission is responsible for “approving the distribution of appropriated funds according to programs and purposes proposed by the Executive Director for Operations[.]” The Commission, through its internal procedures, has established that the Commission shall be “informed of all significant reallocation and reprogramming actions at a threshold of \$500,000 in contract costs or 4 FTE; and approv[e] all resource reallocations/reprogramming actions that establish or modify policy.” This process currently works very well and strikes the appropriate balance between ensuring that the Commission is fully aware of major staff activities and recognizing the statutorily mandated distinction between the Chairman’s administrative responsibilities and the Commission’s policy responsibilities. Therefore, I do not believe that Section 101(a)(4) is necessary.
- Section 102(b) seems to be aligned with Section 2(b) of the 1980 Reorganization Plan. However, Section 102(b) does not include a provision directing the Chairman to prepare and provide to the Commission a budget estimate. This language may result in some uncertainty regarding how the budget is to be prepared. The current Internal Commission Procedures reflect a budget process that is both consistent with the language from the 1980 Reorganization Plan and is satisfactory to all members of the Commission. Retaining the 1980 language would allow the Commission to continue to establish the detailed process for budget preparation through its internal procedures.

- Section 102(c)(2) states that the Chairman and EDO have joint responsibility for keeping the Commission fully informed. However, there are a number of offices that report directly to the Commission, rather than to the Chairman via the EDO. I suggest that this section be revised as follows: "The Chairman, the Executive Director for Operation, and the directors of all Commission-level offices shall have joint responsibility for insuring that the Commission is fully and currently informed about matters within its functions."
- Section 102(c)(3) requires that "[i]f a majority of Commissioners determine that the Chairman has not acted in accordance with [Section 102(c)(1) and (2)], such Commissioners shall provide written notice of the determination to the President," with copies of the notice to the House Committee on Energy and Commerce and the Senate Committee on Environment and Public Works. However, the Commission has shown in the past that it is willing and able to take appropriate and necessary action if it finds that the Chairman is acting in a manner contrary to the agency's internal procedures, regulations, or governing legislation. Therefore, I do not believe that this provision is necessary.
- Section 201 requires that the Commission certify that documents transmitted "to a member of Congress in his or her capacity as chairman or ranking member of a Committee of Congress, shall include a certification that the letter or document is being sent to both the Chairman and ranking minority member of that Committee...." While I do not agree with this provision, I note that the Commission's current practice includes copying the Chairman or ranking member, as appropriate, on correspondence. Therefore, this provision may not be necessary.
- Section 202 outlines time limits for Commission review of Atomic Safety and Licensing Board decisions. I do not believe this provision is necessary. Both 10 CFR Part 2 and the Internal Commission Procedures govern the Commission's adjudicatory activities, including timeframes for Commission action and the appropriate procedures to be followed to bring adjudicatory issues to closure. The Commission's regulations and procedures also include mechanisms whereby the Commission may extend deadlines for voting on adjudicatory issues where appropriate—for example, where the Board decision being appealed is particularly lengthy or complex or where the Commission is engaged in active negotiations on the content of the final order. There is no such provision for extensions of deadlines in the bill language. Because this subject is well covered by the Internal Commission Procedures and 10 CFR Part 2, I do not believe that Section 202 of H.R. 3132 is necessary.
- Section 204 concerns approval of Commissioner international travel by the Chairman. Under the Commission's internal procedures, each Commissioner

approves his or her own travel—both foreign and domestic—as well as the travel of his or her personal staff. The procedures also explain how international invitations made to the entire Commission are addressed. These procedures were revised and approved by the Commission in 2011, and so far are working quite well. For this reason, I do not believe Section 204 is necessary at this time.

16. Please provide any other opinions you believe may further inform the Committee's consideration of H.R. 3132.

I support the provisions in H.R. 3132 regarding the appointment and reporting relationships of the Directors of the Office of Congressional Affairs and Office of Public Affairs. Their role is important, and the provisions in H.R. 3132 will ensure that these offices will always remain accessible to the wider Commission.

Questions from the Honorable Cathy Castor

1. During the hearing, I raised the issue of official international travel by the Commissioners. As I requested during the hearing, please provide an explanation of why your international travel is worth the expense and time away from your responsibilities at the Commission.

First and foremost, it is important to emphasize that, in my experience, the responsibilities of an NRC Commissioner cannot be deferred because of travel away from the office. While on either domestic or international travel, I continue to conduct my domestic responsibilities and continue to review, edit, and write important Commission documents. I am also able to participate in voting on issues before me and regularly interact with my personal staff and the larger NRC staff, Commissioners, as well as with interested stakeholders when necessary via email and conference calls, even if this requires working late into the night or very early in the morning. As a Commissioner, I ensure that my priority is on nuclear safety and security in the United States and globally.

Further, I firmly believe that the agency's international activities are an integral part of the NRC's work, and are managed in a manner consistent with NRC's domestic organizational and programmatic priorities. The Commission's foreign travel is guided by the importance of engagement with a nuclear community that grows more global every day. Ranging from the sharing of nuclear power plant operating experience, collaborating with regulatory counterparts on the import and export of nuclear materials and equipment, fulfilling nonproliferation objectives, and supporting international conventions and treaties, Commissioners dedicate time and resources to overseas travel in order to get a first-hand appreciation of the many pressing issues that are or will affect nuclear safety and security the United States.

NRC's international activities and the Commission's foreign travel focus on engagement with countries to exchange experience related to both radiological materials and nuclear power plant operating, construction and licensing activities that are directly applicable to nuclear safety and security in the United States. By traveling overseas to engage with senior international regulatory counterparts, I have been able to share regulatory insights concerning both radioactive materials and operating experience information from other countries that can be applied to the domestic program. I have observed how NRC's program of assistance helps to strengthen regulatory programs and build relationships with senior nuclear regulatory officials around the world.

As statutorily mandated, and in support of United States Government (USG) nonproliferation objectives, the NRC is responsible for the safe and secure export and import of nuclear materials and equipment. For example, the Commission seeks opportunities for close collaboration with counterpart regulators to ensure that the NRC is in compliance with the International Atomic Energy Agency's Code of Conduct on the Safety and Security of Radioactive Sources, which the Energy Policy Act of 2005 adopted into U.S. law. In addition, as obligated by the USG, the NRC also implements key provisions in various international legal instruments.

In the last fifteen years, several events have significantly changed the landscape within which NRC conducts its domestic and international activities. These events include the terrorist attacks of September 11, 2001, and the subsequent focus on securing radioactive materials of concern, the resurgence of new build for commercial power plants in the United States and abroad, including the significant number of "new entrant" countries seeking nuclear power programs, and the March 2011 Fukushima Daiichi accident following the Tōhoku earthquake and tsunami. In addition, the manufacture of nuclear parts and the provision of nuclear services have been significantly reduced in the United States for domestic nuclear power plant construction, which has created a dependence on the global marketplace among U.S. nuclear power plant owners/operators.

In particular, the Fukushima Daiichi disaster has impacted the pace of my international travel since this tragedy occurred in 2011. Many complex technical and regulatory issues have been brought to the fore since this event and some have prompted me to travel overseas to learn about experience overseas and how it might be applied in the U.S. For example, I have visited both the Fukushima Daiichi site, where the core melt events, occurred as well as the Fukushima Daini plant, where core melts were avoided. Both sites provide valuable insights that apply directly to how the NRC responded to the lessons of March 2011.

In addition, while there is great commonality in how most countries have responded to this disaster, there are important differences that we should seek to understand. For example, the NRC has considered whether to follow the example of many European countries and require the installation of venting filters for nuclear power plants. I visited

sites in Europe where this equipment has been installed and laboratories where it is being further developed. Reviewing these activities directly informed my decisions regarding the use of this equipment in the U.S.

There is strong support for the NRC's international activities from the Congress as well as other Federal agencies. For example, the Congress authorized and appropriated funding in 2004 for NRC to conduct international assistance activities relating to both new nuclear power plants and the safety and security of radioactive materials. Commission travel is coordinated with, and is frequently directly responsive to, USG foreign policy priorities, at a level seen as appropriate for an independent agency. Participation by Commissioners in international conferences and bilateral meetings enhances the USG and NRC's influence with nuclear regulatory officials around the world.

This has been only more the case since the Fukushima disaster. I have traveled to Japan and other countries in the region as they seek to improve their nuclear safety practices and organizations in the wake of Fukushima. The views of the U.S. NRC as related by Commissioners is very influential in these cases and we have been impactful in encouraging nations in the region to strengthen their nuclear regulatory approaches—which, we hope, will make future "Fukushimas" less likely.

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS
Congress of the United States
House of Representatives

COMMITTEE ON ENERGY AND COMMERCE

2125 RAYBURN HOUSE OFFICE BUILDING
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Majority (202) 225-2927
Minority (202) 225-3641

January 15, 2014

The Honorable William C. Ostendorff
Commissioner
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Commissioner Ostendorff:

Thank you for appearing before the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy on Thursday, December 12, 2013, to testify at the hearing entitled "Oversight of NRC Management and the Need for Legislative Reform."

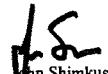
Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Wednesday, January 29, 2014. Your responses should be e-mailed to the Legislative Clerk in Word format at Nick.Abraham@mail.house.gov and mailed to Nick Abraham, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,


Ed Whitfield
Chairman
Subcommittee on Energy and Power


John Shimkus
Chairman
Subcommittee on Environment
and the Economy

cc: The Honorable Bobby L. Rush, Ranking Member, Subcommittee on Energy and Power
The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 12, 2014

The Honorable Ed Whitfield
Chairman, Subcommittee on Energy and Power
Committee on Energy and Commerce
United States House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515-6115

Dear Chairman Whitfield:

I appeared before the Subcommittee on Environment and the Economy on December 12, 2013, along with my colleagues on the Commission. On January 15, 2014, you forwarded questions for the hearing record. The responses to those questions are enclosed. If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

William C. Ostendorff

Enclosures:
As stated

cc: The Honorable Bobby L. Rush



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

February 12, 2014

COMMISSIONER

The Honorable John Shimkus
Chairman, Subcommittee on Environment and the Economy
Committee on Energy and Commerce
United States House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515-6115

Dear Chairman Shimkus:

I appeared before the Subcommittee on Environment and the Economy on December 12, 2013, along with my colleagues on the Commission. On January 15, 2014, you forwarded questions for the hearing record. The responses to those questions are enclosed. If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "W.C. Ostendorff".

William C. Ostendorff

Enclosures:
As stated

cc: The Honorable Paul Tonko

**Committee on Energy and Commerce
Subcommittees on Energy and Power & Environment and Economy Hearing
December 12, 2013
Follow-Up Questions for Written Submission**

Questions for Commissioner Ostendorff
The Honorable Ed Whitfield

1. According to the NRC staff's FY 2012 report on adverse trends in the industry's safety performance: "...the staff identified no statistically significant adverse trends in industry safety performance." In fact, a closer inspection of the long-term trend graphs in that report show that the industry is improving safety in 10 out of the 14 graphs. The staff indicated the remaining four: "...did not have a statistically significant trend." However, the nuclear reactor safety budget has grown 48% over the last ten years even though the number of licensing actions and tasks has decreased 40%. Four reactors permanently shut down last year, another one will this year, and reports persist that others may also.

- a. Please describe what actions you believe the Commission should take to ensure the budget is commensurate with a decreased workload, a shrinking fleet, and improving industry safety performance?
- b. Please describe any recommendations you believe would improve the prioritization and application of resources to matters that are safety significant.

Answer

- a. The Commission will continue to oversee the agency budget formulation and execution processes to ensure resource requests are commensurate with workload. This includes overseeing the annual budget formulation process of developing a two year projected workload in the Nuclear Reactor Safety and Nuclear Materials and Waste Safety Programs, including the anticipated number of licensees and the number and complexity of anticipated license applications. On an annual basis, the Commission oversees the review of the baseline budget and adjusts resource allocations based on several factors, including letters of intent from current and prospective licensees, changes in regulatory requirements, and prior year expenditures. The year prior to executing the budget, the Commission oversees the review of requested resources and associated workload that was previously requested and adjusts them based on the most current information. Lastly, in the year of budget execution, the agency adjusts resources commensurate with the level of work actually received. The most recent budget that was formulated (FY2015) is based on current assumptions regarding the projected workload for FY2014. The agency will begin to develop the FY2016 budget in the coming months using updated assumptions about operating plants, combined license applications, and other indicators of the projected workload.

As of November 16, 2013, the NRC has 3871 staff, including the Office of the Inspector General, which is down 368 employees from FY2010. The NRC has actively engaged in efforts to streamline the organization. For example, the NRC initiated efforts to reduce its overhead by centralizing and consolidating corporate support functions through its Transforming Assets into Business Solutions (TABS) initiative. This effort has resulted in a reduction of Office Support FTE of 273 (25%) from FY2011 to FY2015.

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b. Over the last few years, the agency has made improvements to our budgeting processes. Most recently, the NRC adopted a baseline budgeting approach for the development of the FY2015 budget. The approach uses information on the execution of resources from the prior year as a starting point for developing the resource request, then takes into account known "fact-of-life" changes in workload as well as the Commission's planning objectives for budget development and prioritization of planned activities to ensure prioritization and application of resources to matters that are safety significant. Further, during the budget process, the Commission ensures that adequate resources are requested to achieve the safety and security goals and objectives as described in the agency Strategic Plan. As stated in response to part (a) of this question, with the oversight of the Commission, the agency should continue its annual budget formulation and execution processes to ensure the most effective and efficient application of resources.

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Questions for Commissioner Ostendorff
The Honorable John Shimkus

1. Given the DC Circuit Court of Appeals reaffirming the NRC's obligation under the Nuclear Waste Policy Act to review the Yucca Mountain license application, do you as an individual commissioner believe it is incumbent upon the NRC to request the funding necessary to complete the license review?

Answer

The Commission has already acted to comply with the Court's decision ordering the NRC to "promptly continue with the legally mandated licensing process" for the Department of Energy's Yucca Mountain license application, "unless and until Congress authoritatively says otherwise or there are no appropriate funds remaining." I do not believe that any further action by the Commission is compelled by the D.C. Circuit decision. The Court did not require the NRC to request further appropriations; in fact, the Court went so far as to state that "Congress, of course, is under no obligation to appropriate additional money for the Yucca Mountain project." But, it is more than clear from the decision that the NRC has a duty to comply with the Nuclear Waste Policy Act. I personally believe it is incumbent upon the NRC to request that Congress appropriate funds to the NRC from the Nuclear Waste Fund in furtherance of the licensing process unless and until the Nuclear Waste Policy Act is amended to provide a different statutory direction for repository licensing.

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The Honorable John Shimkus

2. Do you as an individual commissioner believe the NRC should propose a supplemental budget request to the Office of Management and Budget to support full resumption of the license review? If not, why not?

Answer

As previously stated, it is clear from the D.C. Circuit Court decision that the NRC has a duty to comply with the Nuclear Waste Policy Act. I personally believe it is incumbent upon the NRC to request that Congress appropriate funds to the NRC from the Nuclear Waste Fund in furtherance of the licensing process unless and until the Nuclear Waste Policy Act is amended to provide a different statutory direction for repository licensing. The first logical steps are being implemented as directed in the Commission's November 18, 2013, adjudicatory order and we appear to have sufficient carryover funds to complete these activities without an FY14 supplemental appropriation.

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The Honorable John Shimkus

3. If the Commission fails to request funding for completing the Yucca Mountain licensing process, do you as an individual commissioner believe that would weaken the basis for Waste Confidence findings?

Answer

No. At a high level, the fundamental question in the area of Waste Confidence is not when a repository will be available, but whether spent fuel can be safely stored and without significant environmental impacts until a repository becomes available. More importantly, the staff has completed a draft Generic Environmental Impact Statement (GEIS) documenting the impacts if a repository is delayed or does not become available. Although the Commission is currently considering comments it has received on the GEIS that it has prepared, it is confident not only that it is technologically feasible to license and construct a repository, but also that the final GEIS will adequately address the impacts of continued storage under each of these scenarios.

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Questions for Commissioner Ostendorff
The Honorable John Shimkus

4. Given the fact that the NRC routinely issues draft SERs during other license reviews and later revises them, do you as an individual commissioner believe the Commission should utilize the same approach on the Yucca Mountain license review for the sake of transparency? If not, why not?

Answer

It is not the NRC's practice to issue "draft" safety evaluation reports (SERs). For some licensing actions, the NRC issues SERs with open items. An SER with open items is final on all matters except those designated as "open items," and receives the same level of management and legal review as an SER with no open items. Once open items are closed, a complete SER is issued. For other licensing actions, the NRC issues chapters of the SER as they are completed.

With respect to the SER for the Yucca Mountain license review, in our November 18, 2013, Order (CLI-13-08), we directed the staff to work on the remaining four volumes of the SER (Volumes 2-5), using the approach that was underway when work on the SER was suspended—that is, the staff should work on the completion of all remaining volumes concurrently but issue each SER volume upon completion. As stated in the November 18, 2013, Order, we believe that the serial release of completed SER volumes will ensure transparency as to the staff's activities.

The current estimate calls for completion of the SER by January 2015. I believe the agency can work most effectively and efficiently to achieve that milestone by maintaining its current approach.

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The Honorable John Shimkus

5. Recently, the NRC staff provided a 400-page report to the Commission: “*Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor.*” The cover memo for that report states:

“This study shows the likelihood of a radiological release from the spent fuel after the analyzed severe earthquake at the reference plant to be very low (about 1 time in 10 million years or lower).”

The staff has provided the Commission with a 200-page report entitled “*Staff Evaluation and Recommendation for Japan Lessons-Learned Tier 3 Issue on Expedited Transfer of Spent Fuel.*” In this report, the staff concluded that:

- “*The costs of expedited transfer of spent fuel to dry cask storage outweigh the benefits*;”
- “*Additional studies are not needed*;” and
- “*No further regulatory action is recommended for the resolution of this issue and this Tier 3 item should be closed*.”

a. As an individual commissioner, do you have any reason to doubt the NRC staff’s competence in this regard?

Answer

No. The staff exercised due diligence in conducting a thorough and systematic Spent Fuel Pool Study and regulatory analysis of expedited transfer of spent fuel to dry cask storage. Further, the results of the staff’s 2013 Spent Fuel Study are consistent with past studies’ conclusions that spent fuel pools are likely to withstand severe earthquakes without leaking, and that the risk of a large release due to spent fuel pool accidents is very low.

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Questions for Commissioner Ostendorff
The Honorable Joe Barton

- 1. In November 2013, NRC released a report entitled "A comparison of U.S. and Japanese regulatory requirements in effect at the time of the Fukushima accident."**
 - a. Do you support all the findings of the staff report?**
 - b. The authors of the report acknowledge that the staff's comparison was not an exhaustive review. Do you think it is appropriate for the Commission to consider revising the NRC's regulatory framework without having an exhaustive review as a solid basis for such a revision?**
 - c. What differences between U.S. and Japanese regulatory framework were left out of the final report? Why were they not deemed to merit further analysis?**

Answer

- a. The Commission directed the staff to document its comparison of U.S. and Japanese regulatory requirements that were in effect at the time of the accident, focused on those areas most relevant to the sequence of events and accident mitigation capabilities at Fukushima. The staff was also directed to describe how those differences were factored into post-Fukushima actions taken by the NRC.**

I am satisfied that the report prepared by the NRC staff fulfilled the stated objectives. The staff appropriately focused their attention on the requirements in the most relevant areas including protection from design basis natural phenomena, loss of ultimate heat sink, loss of electrical power, containment venting, and severe accident management. Further, I support the staff's statement that "there should be no implication that the Fukushima accident and associated consequences could or would have been completely avoided assuming Japan had the same U.S. regulatory framework prior to the accident." Therefore, as reflected in my approval of the post-Fukushima requirements, the experience gained from the Fukushima Dai-ichi accident warranted actions to enhance safety in the United States.

- b. Following the accident at Fukushima, the NRC focused on the course of events leading up to, during, and after the Fukushima accident to determine if our regulatory programs were sufficient for U.S. plants to prevent or mitigate the types of conditions that contributed to core damage and the release of radioactive materials following the earthquake and tsunami in Japan. As an example, the mitigating strategies implemented at US plants following the terrorist attacks of September 11, 2001, to cope with large fires and explosions may have helped in responding to an extended loss of electrical power and core cooling capability that occurred at Fukushima. However, this equipment was not designed or required to handle multi-unit events or survive extreme natural phenomena, such as a beyond design basis flood.**

Upon identifying these limitations, the NRC's response was to issue orders to U.S.

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plants to install additional portable power supplies and pumps that would be protected from extreme natural phenomena to ensure that equipment would be available to cool the reactors if all electrical power is lost, no matter what causes the loss of power. This new requirement is one of the most safety significant lessons to be learned from the Fukushima accident, and it was identified by reviewing the event itself, rather than studying the differences in the U.S. and Japanese regulations.

The staff's efforts to identify and implement the remaining Fukushima lessons learned follow a similar methodology. The NRC staff has had extensive discussions with other foreign national regulators, including the Japanese Nuclear Regulation Authority, to compare lessons learned and implementation strategies for improvements to plant designs and operations. These discussions have informed the staff's effort and confirmed that we have identified the appropriate lessons learned and possible improvements for U.S. plants.

- c. A detailed comparison of the regulatory systems in Japan and the U.S. would involve reviewing the governing legislation and regulations, as well as plant specific licenses, technical specifications, and guidance documents prepared by standards developing organizations, regulators, and industry groups. Such a review, in combination with other factors such as cultural and societal influences, would be necessary to fully understand how the differences between the regulatory systems are actually reflected in differences in plant design and operation. Given the resource implications of such a major study and the availability of insights from a variety of Japanese and international reviews, the NRC's comparison focused on those areas most relevant to the sequence of events and accident mitigation capabilities at Fukushima. The comparison did not assess differences in administrative requirements, plant licensing or license amendment processes, reporting and inspection programs, or technical areas unrelated to the sequence of events at Fukushima. Examples of technical areas that were not directly related to the sequence of events and therefore not included in the comparison are fire protection, security, and design basis accidents (e.g., losses of heat removal or inventory with AC power available).

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Questions for Commissioner Ostendorff
The Honorable Lee Terry

1. Prior to this hearing did Chairman Macfarlane inform you of her intention to declare her opposition to H.R. 3132?

Answer

Through my periodic interactions with Chairman Macfarlane, I was aware that she had some reservations about certain provisions of H.R. 3132.

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The Honorable Lee Terry

2. Did you Do you support or oppose the policy goals of HR 3132? Would you be willing to work with staff to perfect it?

Answer

I have previously responded to questions for the record (July 24, 2012, House Energy and Commerce joint hearing entitled "NRC Policy and Governance Oversight") related to legislative reform of the Commission's governance structure and the Commission's function as a collegial body, stating that if no changes are made, the current legislative framework provides a viable structure. But, I continue to believe that three changes could be made to the legislation that would strengthen the Commission's function as a collegial body. Those changes dealt with the Chairman's responsibility for "developing policy planning and guidance," clarifying the Chairman's use of emergency powers, and the reporting structure of the Offices of Congressional Affairs and Public Affairs. I believe H.R. 3132 would address those concerns.

My staff and I are available to provide insights and comments on your work with H.R. 3132.

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The Honorable Lee Terry

3. The June 26, 2012 NRC IG Report “Possible Violations of the Reorganization Plan No. 1 of 1980 and NRC’s Internal Commission Procedures by NRC Chairman” (2012 IG Report) states:

“President Carter said that the Chairman has a functional duty under the Reorganization Plan to declare emergency authority, and if he enacted emergency authority without a declaration, he would have been in violation of the Reorganization Plan. President Carter envisioned a Chairman exercising emergency authority for a specific transient emergency lasting a matter of days, not emergency authority for a matter of months.”

- a. Do you agree with President Carter that a chairman has a functional duty to declare emergency authority? If not, why not?
- b. How long do you believe a chairman should be allowed to exercise emergency authority?

Answer

- a. I have long believed that a formal declaration upon the invocation of emergency authority would add clarity to the Commission's response and be beneficial to the leadership and management during an emergency.

The recently enacted Public Law 113-76, which makes appropriations for fiscal year 2014, and other purposes, also addresses this issue. Section 402 directs the Chairman of the Nuclear Regulatory Commission to notify the other members of the Commission as well as certain named Congressional Committees not later than 1 day after the Chairman begins performing functions under his or her Section 3 authority. I believe this is a reasonable approach.

- b. If the Chairman believes that it is necessary, the Chairman should be allowed to exercise emergency authority for the duration of the emergency. At the same time, I believe that the language in H.R. 3132 regarding limitations and extensions of emergency authority is very reasonable.

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4. The 2012 IG Report states:

"President Carter stated it would have been inappropriate for the Chairman to exercise emergency authority for a nuclear incident in Japan. Absent a domestic emergency, the authority lies with the full Commission and any review of the nuclear incident in Japan should have been in the hands of the Commission."

Do you believe the use of emergency authority for foreign events is warranted? Why or why not?

Answer

The Reorganization Plan No. 1 of 1980 states that emergency authority pertains "to an emergency concerning a particular facility or materials licensed or regulated by the Commission." I believe the statute is clear: if there is no emergency that specifically affects an NRC-licensed facility, the Chairman may not exercise his or her emergency authority.

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The Honorable Lee Terry

5. During an emergency, the chairman or a designee acts as the Executive Team Director. NRC briefing material list the Executive Team Director's key responsibilities for an activated operations center as the following:

- *"Receive initial and periodic briefings on the nature and progression of the incident*
- *Ensure other Commissioners are kept informed*
- *Manage external interface (Federal agencies, White House, States, Congressional officials, State Department, IAEA, tribal organizations)*
- *Call to Governor's designee and DHS Secretary*
- *Review and approve Situation Report (SITREP) and Press Releases*
- *Determine if Site Team (expanded activation mode) is necessary*
- *Prepare/Act as agency spokesperson for news center and interagency events (e.g. WH briefings)*

Please explain whether you think the inclusion of an emergency declaration would be burdensome considering these key responsibilities already exist and procedures have been established for managing necessary communications.

Answer

I do not believe that a formal declaration of an emergency would be burdensome.

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6. The 2012 IG Report states:

"Several officials commented that NRC has no procedures to follow for the Chairman to assert his emergency authority."

Do you believe the NRC should have a procedure that clearly articulates the circumstances or actions that would require a chairman to exercise emergency authority and describes the process for doing so?

- a. If so, please describe what you believe should be included in such a procedure.
- b. If not, why not?

Answer

At a high level, Reorganization Plan No. 1 of 1980 sets forth the general circumstances that would enable a Chairman to exercise emergency authority (i.e., there must be "an emergency pertaining to a particular facility or materials licensed or regulated by the Commission"). The Internal Commission Procedures and various historical memoranda also provide additional guidance regarding the circumstances or actions that would allow a Chairman to exercise emergency authority. There could be value in creating a procedure that accounts for these; however, it would be important to retain flexibility to respond to an extraordinary circumstance that may not be envisioned.

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The Honorable Lee Terry

7. According to NRC briefing materials, licensees are required to notify the NRC of an event within 15 minutes. The NRC then expects to notify – within one hour – EPA, DOE, DHS, HHS, USDA, and FEMA. For what length of time do you believe a chairman should be allowed to unilaterally exercise the power of the full commission before notifying the public, the Congress, and fellow commissioners?

Answer

I believe that the language in H.R. 3132 regarding notification of the public, the Congress, and fellow Commissioners is reasonable.

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The Honorable Lee Terry

8. The Office of Public Affairs leads one of the teams staffing the operations center during an emergency. Wouldn't this be an appropriate and efficient manner to notify the public in the event a chairman decides to exercise emergency authority? If not, why not?

Answer

This approach seems reasonable.

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The Honorable Lee Terry

9. One of the chairman's responsibilities as the Executive Team Director is to keep the commissioners informed. Do you believe the procedures in place to meet that responsibility would be adequate to notify fellow commissioners in the event a chairman decides to exercise emergency authority? If not, why not?

Answer

The current Internal Commission Procedures state that "it is recommended that the Chairman provide notice to the other Commissioners and the NRC staff that an emergency status under Section 3(a) has been entered." In my opinion, these Procedures can be strengthened and clarified. The recently enacted Public Law 113-76, which makes appropriations for fiscal year 2014, and other purposes, addresses this issue. Section 402 directs the Chairman of the Nuclear Regulatory Commission to notify the other members of the Commission as well as certain named Congressional Committees not later than 1 day after the Chairman begins performing functions under his or her Section 3 authority. I believe this is a reasonable approach and our Internal Commission Procedures should be changed to reflect this language.

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The Honorable Lee Terry

10. The Office of Congressional Affairs participates on one of the teams staffing the operations center during an emergency. Do you believe this to be an appropriate and efficient manner to notify Congressional officials in the event a chairman decides to exercise emergency authority? If not, why not?

Answer

This approach seems reasonable.

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11. NRC's procedures reference communications that are pre-planned. Do you believe developing preplanned notifications of a chairman's decision to exercise emergency authority might be an effective way to ensure the timeliness and efficiency of such notifications? If not, why not?

Answer

Yes, emergency planning and communications planning are effective forms of preparation for potential future emergency situations.

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12. In the hearing, Chairman Macfarlane testified that the agency's budget is developed by NRC staff. Section 201 of the Energy Reorganization Act of 1974 states:

"Each Member of the Commission, including the Chairman, shall have equal responsibility and authority in all decisions and actions of the Commission, shall have full access to all information relating to the performance of his duties or responsibilities, and shall have one vote."

The prior NRC chairman asserted budget authority to unilaterally close down the legally-mandated review of the Yucca Mountain repository license application. Since the budget is a major instrument of policymaking, which is the purview of the Commission, please describe whether you believe the Chairman should be allowed to influence budget development prior to consideration by the full commission.

Answer

Reorganization Plan No. 1 of 1980 states that the Chairman "shall determine the use and expenditure of funds of the Commission, in accordance with the distribution of appropriated funds according to major programs and purposes approved by the Commission." The NRC's current Internal Commission Procedures (ICPs) describe in more detail the budget process followed by the Commission. As approved by the Commission, the ICPs state that as part of the Commission's collegial functions, the Commission revises budget estimates and determines the distribution of appropriated funds according to major programs and purposes. As a best practice, the initial step in this process at the Commission level is for the Chairman to provide high-level planning objectives for budget development and prioritization of planned activities to the Commission for review and approval. This is done prior to the start of the annual budget formulation process.

The Chairman is also responsible for proposing to the Commission the distribution of appropriated funds according to the agency's major programs and purposes. The Commission is responsible for review and approval of the Chairman's budget proposal.

Our ICPs provide a suitable process for collegial budget formulation, review, and approval and I do not believe any changes are needed.

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13. Section 201 of the Energy Reorganization Act of 1974 states:

"In carrying out any of his functions under the provisions of this section the Chairman shall be governed by general policies of the Commission and by such regulatory decisions, findings, and determinations as the Commission may by law be authorized to make."

Section 2 of the Reorganization Plan of 1980 states:

"The Chairman as principal executive officer and the Executive Director for Operations shall be governed by the general policies of the Commission and by such regulatory decisions, findings, and determinations, including those for reorganization proposals, budget revisions and distribution of appropriated funds, as the Commission may by law, including this Plan, be authorized to make."

If a majority of the Commission believes that the Chairman is failing to operate in accordance with the internal commission procedures, what action do you think commissioners should take? Do you believe legislation authorizing such action would provide clarity to such a situation?

Answer

The Internal Commission Procedures (ICPs) is an internal document that is the product of collegial decision-making by the Commission. The ICPs set forth the procedures governing the conduct of our business at the NRC. Therefore, the Commission is the proper body to oversee the implementation of the ICPs.

I do not believe legislation is needed to authorize any specific action by the Commission with respect to a Chairman's operations under the ICPs. As a Senate-confirmed official, I took an oath of office to well and faithfully discharge the duties of my office. I take this oath seriously and believe that I have an obligation, regardless of legislation, to the NRC, its staff, and the American people to ensure the proper functioning of this agency.

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14. The NRC Inspector General issued a report “NRC Chairman’s Unilateral Decision to Terminate NRC’s Review of DOE Yucca Mountain Repository License Application” on June 6, 2011 (2011 OIG Report):

“OIG reviewed the Commissioners’ voting process associated with SECY-10-0102 and learned that the Internal Commission Procedures were not followed relative [sic] to voting deadline, extension requests, or polling of other Commissioners to determine whether they agree with extension requests.”

And:

“Although the notational voting process associated with SECY-10-0102 was complete as of October 29, 2010, as of the date of this report the Commission has not held an affirmation vote on the matter and the draft order continues to sit in deliberation before the Commission for affirmation.”

- a. Please indicate how long you believe a chairman or commissioner should be allowed to prevent an adjudicatory decision from being finalized.
- b. Please describe what you believe would be the best mechanism to ensure Internal Commission Procedures are enforced.
- c. Please provide any other resolution to such a situation that you believe would be effective at ensuring adjudicatory decisions are not unnecessarily delayed.

Answer

- a. The Internal Commission Procedures (ICPs) provide a comprehensive and systematic structure that, when followed, ensures that voting is handled in a timely manner and that the Commission functions effectively. The circumstances associated with the SECY-10-0102 were an unfortunate anomaly and are not likely to be repeated.
- b. The ICPs provide a comprehensive, clear process to guide Commission action on adjudicatory matters. The ICPs provide that Commissioners' votes on Commission papers—including adjudicatory papers—are normally requested in 10 business days. The ICPs further provide that approval of extensions of time to vote on an adjudicatory paper must be given by a Commission majority. Once voting is complete on an adjudicatory paper, the NRC adjudicatory staff will submit the draft final order to establish a majority position on the decision. Commissioners at that time have an opportunity to make changes to the order and/or incorporate additional views. As soon as a majority position on the decision has been established, the Secretary of the Commission will poll the Commission on scheduling the affirmation of the decision, and an affirmation will then be scheduled to obtain a formal vote of the Commission.

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- c. In view of the robust internal procedures already in place, no revisions to the ICPs—or other mechanisms—are needed to ensure that the ICPs are enforced. Each adjudication is different. The Commission continues to work collegially, taking into account all Commission priorities, to ensure the issuance of reasoned, thoughtful decisions based on informed adjudicatory records, consistent with the Commission's stated goal of achieving prompt resolution of adjudicatory disputes.

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15. Please describe any unintended consequences you believe H.R. 3132 presents. For each postulated consequence please provide legislative language you believe would adequately mitigate it.

Answer

As I have stated before, if no changes are made to Reorganization Plan No. 1 of 1980, the current legislative framework provides a viable structure. I believe that certain of the other provisions could have unintended consequences, prove difficult in implementation, or are unnecessary. For example, unlike Reorganization Plan No. 1 of 1980, the bill does not specify that the Chairman has responsibility "for developing policy planning and guidance for consideration by the Commission." I have previously supported changing the Reorganization Plan to amend the Chairman's responsibility from "developing policy planning and guidance" to "developing plans and guidance on established Commission policy." The bill takes my previous position a step further by eliminating the Chairman's responsibility entirely. While this provision is certainly workable, I believe the Chairman should have the lead for certain matters based on established Commission policy.

Further, in H.R. 3132, emergency functions would be limited to "responding to, issuing orders respecting, advising United States civil authorities and the United States public about, and directing and coordinating actions relating to" the emergency. The Reorganization Plan, on the other hand, lists broader activities, including "determining specific policies," and does not limit the function of advising civil authorities and the public to "United States" audiences. There could be a circumstance where in an emergency a Chairman would need to potentially act expeditiously on a new policy not-yet-approved by the Commission and there is no time to reach a Commission decision. I would not want legislation to be an impediment to that.

The bill provides that any officer or employee may communicate directly with the Commission, or any Commissioner, on any "critical problem" or "matter of public health or safety or common defense and security" that "is not being properly addressed." Personally, I have an open door policy and support any employee that wants to meet with me about any issue having the ability to do so. I believe employees already feel the ability to do so and thus do not believe legislation is necessary to address this concern.

Regarding voting matters, H.R. 3132 would require each Commissioner to vote on a decision appealed from the Board within 90 days of receiving final briefs and once a majority position has been established, any Commissioner that has not yet voted would have 3 days to vote or be excluded from voting. I appreciate the reasoning for this; however, many times this is simply not feasible for some of the more complex matters. I work hard to adhere to the ICPs in the way I conduct my business as a Commissioner and my goal has always been, and will always be, to address all voting matters, both for policy and adjudicatory items, within the timeframes of the ICPs. I have found that the ICPs provide a comprehensive and systematic structure that when followed allows the Commission to function effectively.

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Finally, on one additional voting matter, the bill states that if no majority position is established because of a tie vote, publication of any decision (including any adjudicatory orders and direction to the staff) would be required within 30 days after voting is completed. In practice, I do not know how a decision could be published if there is no majority position and the Commissioners have not yet determined that the vote resolutions process is complete.

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Questions for Commissioner Ostendorff
The Honorable Lee Terry

16. Please provide any other opinions you believe may further inform the Committee's consideration of H.R. 3132.

Answer

I believe that my previous answers provide my opinions on H.R. 3132.

**Committee on Energy and Commerce
Subcommittees on Energy and Power & Environment and Economy Hearing
December 12, 2013
Follow-Up Questions for Written Submission**

Questions for Commissioner Ostendorff
The Honorable Cathy Castor

1. During the hearing, I raised the issue of official international travel by the Commissioners. As I requested during the hearing, please provide an explanation of why your international travel is worth the taxpayer expense and time away from your responsibilities at the Commission.

Answer

As the world's preeminent nuclear regulator, international activities are an integral part of the Nuclear Regulatory Commission's work, and are managed in a manner consistent with the NRC's domestic, organizational, and programmatic priorities. The Commission's foreign travel is guided by the importance of engagement with a nuclear community that grows more global every day. Our travel covers many issues ranging from the sharing of nuclear power plant operating experience, collaborating with regulatory counterparts on the import and export of nuclear materials and equipment, fulfilling nonproliferation objectives, and supporting international conventions and treaties. As Commissioners, we also help represent the NRC in our close working relationships with nuclear agencies in more than 35 countries. In my personal opinion, my overseas travel has been consistent with U.S. government objectives and is appropriately undertaken.

The NRC's international activities and the Commission's foreign travel focus on engagement with countries to exchange experience related to both radiological materials and nuclear power plant operating, construction, and licensing activities that are directly applicable to nuclear safety and security in the United States. By traveling overseas to engage with senior international regulatory counterparts, Commissioners share regulatory insights concerning both radioactive materials and operating experience information from other countries that can be applied to the domestic program. These meetings also serve as vehicles for the health and safety assistance the NRC supplies to less-developed countries in their attempts to prevent accidents and to develop and improve their regulatory capabilities and their nuclear safety infrastructure. As the senior-most officials of the NRC, members of the Commission act as a force-multiplier in the promotion of nuclear safety and have an unparalleled ability to influence key international activities. Thus, by building these relationships with senior nuclear regulatory officials around the world, we help facilitate the NRC's strategic goal to support U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation both at home and abroad.

While on travel, be it international or domestic, my work as a Commissioner does not stop. I continue to conduct my domestic responsibilities, such as reviewing policy papers, voting on issues of importance before the Commission, and maintaining continuous involvement in Commission matters, even if this requires working at non-traditional hours.

**Enclosure
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